

NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L12 11653 SEA FILE=REGISTRY SUB=L6 SSS FUL L10  
L13 143082 SEA FILE=HCAPLUS ABB=ON PLU=ON L6  
L14 57144 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
L15 35733 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 (L) PREP?/RL  
L16 258 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 (L) (MULTI? (W)  
ARM# OR STAR# OR ?BRANCH?)  
L17 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND PUR/RL  
L18 170 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND USES/RL  
L19 89 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND POLYMER?/SC, SX  
L20 64 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND PLASTIC?/SC, SX  
L21 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND ?LIVING?  
L22 130 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 OR L19 OR L20 OR  
L21  
L23 52 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND (1840-1999)/PY, P  
RY, AY  
L25 87 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) PREP/RL (L)  
(MULTI(W) ARM# OR STAR# OR ?BRANCH?)  
L26 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND PUR/RL  
L27 53 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND USES/RL  
L28 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND POLYMER?/SC, SX  
L29 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND PLASTICS?/SC, SX  
  
L30 41 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 OR L28 OR L29  
L31 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (1840-1999)/PY, P  
RY, AY  
L32 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 NOT L31

=> file hcaplus  
FILE 'HCAPLUS' ENTERED AT 10:49:28 ON 27 JUL 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> d l32 1-35 ibib abs hitstr hitind

L32 ANSWER 1 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:483940 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:77719  
TITLE: Core-corona-type star polymer microemulsions,  
particles, and their manufacture  
INVENTOR(S): Kim, In Hwa; Park, Jong Jin  
PATENT ASSIGNEE(S): Kawamura Institute of Chemical Research, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001181514	A2	20010703	JP 1999-366051	199912 24

PRIORITY APPLN. INFO.:

<--  
JP 1999-366051

199912  
24

<--

AB The emulsions comprise hydrophobic solns. dispersed in aq. solvents contg. amphipathic star polymers having porphyrin as central skeleton. Thus, an aq. emulsion contg. Si(OEt)<sub>4</sub>, star polymer [manufd. by block polymn. of 2-methyl-2-oxazoline and 2-phenyl-2-oxazoline in the presence of tetra(p-iodomethylphenyl)porphyrin], HCl, and CHCl<sub>3</sub> was left at room temp. for 24 h to give a silica particle including porphyrin star polymer.

IT 124400-28-8P, Acrylamide-styrene block copolymer  
RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(having porphyrin center; manuf. of core-corona-type star polymer microemulsions and particles)

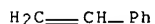
RN 124400-28-8 HCAPLUS

CN 2-Propenamide, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

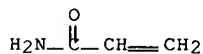
CMF C8 H8



CM 2

CRN 79-06-1

CMF C3 H5 N O



IC ICM C08L101-00  
ICS B01J013-00; C08J003-16; C08L079-04

CC 37-6 (**Plastics** Manufacture and Processing)  
Section cross-reference(s): 78

IT Polymers, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**  
(star-branched; manuf. of core-corona-type star polymer microemulsions and particles)

IT 25931-20-8P, 2-Ethyl-2-oxazoline-2-methyl-2-oxazoline copolymer  
124400-28-8P, Acrylamide-styrene block copolymer  
133304-13-9P, 2-Methyl-2-oxazoline-2-phenyl-2-oxazoline block copolymer 138446-05-6P, 2-Ethyl-2-oxazoline-2-methyl-2-oxazoline block copolymer  
RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(having porphyrin center; manuf. of core-corona-type star polymer microemulsions and particles)

IT 1314-23-4P, Zirconia, preparation 7631-86-9P, Silica, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**  
(including star polymer; manuf. of core-corona-type star polymer microemulsions and particles)

IT 25085-83-0, Poly(benzyl methacrylate)  
RL: TEM (Technical or engineered material use); **USES (Uses)**  
(including star polymer; manuf. of core-corona-type star polymer microemulsions and particles)

L32 ANSWER 2 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:369774 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:368385  
 TITLE: Oil-based ink for electrostatic ink-jet printing  
 INVENTOR(S): Kato, Eiichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001139861	A2	20010522	JP 2000-261752	20000830
<--				
PRIORITY APPLN. INFO.:		JP 1999-243344	A	19990830
<--				

GI



AB The ink, showing stable extrusion from an outlet of an electrostatic ink jet printer, contains charged resin particles dispersed in a nonaq. liq. medium with elec. resistivity  $\geq 10^9 \Omega\text{-cm}$  and dielec. coeff.  $\leq 3.5$ . The particles are those prepd. by polymn. granulation of  $\geq 1$  nonaq. medium-sol. monofunctional monomers giving nonaq. medium-insol. polymers and  $\geq 1$  monomers substituted with F- and/or Si-contg. groups, which are polymerizable with the above monomers, in the presence of a nonaq. medium-sol. polymer as dispersion stabilizer. The dispersion-stabilizing polymer with mass-av. mol. wt.  $2 \times 10^4 - 1 \times 10^6$  is a star-shaped block copolymer involving  $\geq 3$  AB segments linked to an org. group residue wherein 1 end of the A segment is linked to an org. residue. The A segment in the dispersion-stabilizing polymer has  $\geq 1$  polymer components corresponding to the medium-sol. 1st monomers for the charged resin particles and  $\geq 1$  polymer component substituted with  $\geq 1$  polar groups selected from phosphono, carboxyl, sulfo, OH, formyl, amino, P(O)(OH)E1 (E1 = hydrocarbyl, hydrocarbyloxy), CONE3E4, SO2NE3E4 (E3, E4 = H, hydrocarbyl), and cyclic acid anhydride-contg. group. The B segment involves [CHb1Cb2(X1Y1)] [X1 = CO2, OCO, (CH2)xCO2, (CH2)xOCO, O; x = 1-3; Y1 = C $\geq$ 8 aliph. group; b1, b2 = H, halogen, cyano, C1-7 hydrocarbyl; CO2, Z1, CO2Z1; Z1 = C1-22 hydrocarbyl]. Thus, 98.5 g vinyl acetate and 1.5 g CH2:CMCO2CH2C6F13 were polymd. in the presence of star-shaped 15:15:70 Me methacrylate-Me acrylate-stearyl methacrylate block copolymer initiated with trifunctional org. compd. I in a mixt. of EtOH and Isopar H using 2,2'-azobis(isovaleronitrile) and AIBN at 80° for 4 h to give polymer particles, 50 g of which were dispersed in a blue paraffin oil (Shellsol 71)-based medium to give the jet-printing ink.

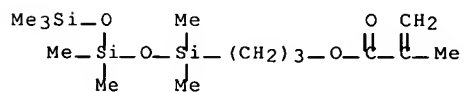
IT 339986-50-4P 339986-54-8P 339986-61-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of star-shaped block copolymer dispersion stabilizer)  
 RN 339986-50-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(heptamethyltrisiloxanyl)propyl ester, polymer with N-[3-(dipropylamino)propyl]-2-propenamide, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 150624-86-5

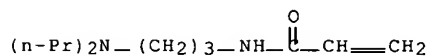
CMF C14 H32 O4 Si3



CM 2

CRN 65699-81-2

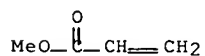
CMF C12 H24 N2 O



CM 3

CRN 96-33-3

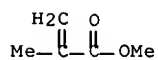
CMF C4 H6 O2



CM 4

CRN 80-62-6

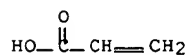
CMF C5 H8 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



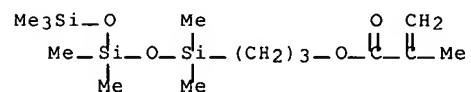
RN 339986-54-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(heptamethyltrisiloxanyl)propyl ester, polymer with N-[4-(dimethylamino)phenyl]-N-methyl-2-propenamide, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 150624-86-5

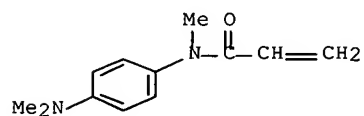
CMF C14 H32 O4 Si3



CM 2

CRN 107314-56-7

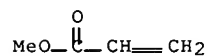
CMF C12 H16 N2 O



CM 3

CRN 96-33-3

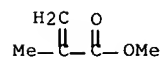
CMF C4 H6 O2



CM 4

CRN 80-62-6

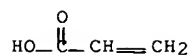
CMF C5 H8 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



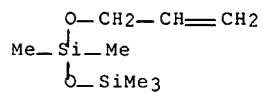
RN 339986-61-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)propyl ester, polymer with methyl 2-methyl-2-propenoate, methyl 2-propenoate, pentamethyl(2-propenyloxy)disiloxane and N-[10-(phosphonooxy)decyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 339986-55-9

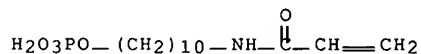
CMF C8 H20 O2 Si2



CM 2

CRN 305814-10-2

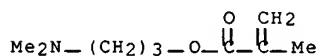
CMF C13 H26 N O5 P



CM 3

CRN 20602-77-1

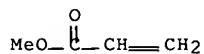
CMF C9 H17 N O2



CM 4

CRN 96-33-3

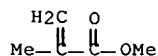
CMF C4 H6 O2



CM 5

CRN 80-62-6

CMF C5 H8 O2



IT 159967-55-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);

PREP (Preparation); USES (Uses)

(star-shaped; oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of star-shaped block copolymer dispersion stabilizer)

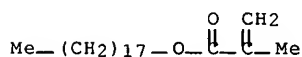
RN 159967-55-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with N,N-dimethyl-2-propenamide and octadecyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

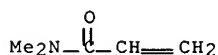
CMF C22 H42 O2



CM 2

CRN 2680-03-7

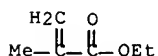
CMF C5 H9 N O



CM 3

CRN 97-63-2

CMF C6 H10 O2



IC ICM C09D011-00

ICS B41J002-01; B41M005-00

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 38

IT Polymers, uses

RL: MOA (Modifier or additive use); USES (Uses)

(block; oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of star-shaped block copolymer dispersion stabilizer)

IT	308278-63-9P	339986-32-2P	339986-33-3P	339986-34-4P
	339986-35-5P	339986-36-6P	339986-37-7P	339986-38-8P
	339986-39-9P	339986-40-2P	339986-41-3P	339986-42-4P
	339986-43-5P	339986-44-6P	339986-45-7P	339986-46-8P

339986-47-9P 339986-48-0P 339986-49-1P 339986-50-4P  
339986-51-5P 339986-52-6P 339986-53-7P 339986-54-8P  
339986-56-0P 339986-57-1P 339986-58-2P 339986-59-3P  
339986-60-6P 339986-61-7P 339986-62-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation); USES (Uses)**

(oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of **star**-shaped block copolymer dispersion stabilizer)

IT 150551-83-0 150551-89-6 150551-92-1 150551-93-2 150551-97-6  
154340-06-4 155293-25-7 159967-38-1 159967-39-2 159967-40-5  
159967-41-6 159967-42-7 159967-43-8 159967-44-9

RL: CAT (Catalyst use); **USES (Uses)**

(polymn. initiator; oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of **star**-shaped block copolymer dispersion stabilizer)

IT 150469-59-3P 159967-35-8P 159967-36-9P, Methyl acrylate-methyl methacrylate-stearyl methacrylate block copolymer 159967-45-0P  
159967-46-1P 159967-47-2P 159967-48-3P 159967-49-4P  
159967-50-7P 159967-51-8P 159967-52-9P 159967-53-0P  
159967-54-1P 159967-55-2P 159967-56-3P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); **PREP (Preparation); USES (Uses)**

(**star**-shaped; oil-based ink for electrostatic ink-jet printing contg. charged particles prepd. in presence of **star**-shaped block copolymer dispersion stabilizer)

L32 ANSWER 3 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:178459 HCAPLUS Full-text

DOCUMENT NUMBER: 134:223169

TITLE: Multireactivity polymercaptans, star polymers and methods of preparation

INVENTOR(S): Petersen, Paul M.; Harlan, Robert D.; Schoenberg, Jules E.

PATENT ASSIGNEE(S): National Starch & Chemical Investment Holding Corporation, USA

SOURCE: U.S., 14 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6201099	B1	20010313	US 1998-190156	19981112
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WO 2001096291	A1	20011220	WO 2000-US15109	20000602
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1289946	A1	20030312	EP 2000-939486	20000602
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,			



PT, IE, SI, LT, LV, FI, RO, MK, CY, AL  
 PRIORITY APPLN. INFO.: US 1998-190156 A 199811  
 12  
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 WO 2000-US15109 W 200006  
 02

OTHER SOURCE(S): MARPAT 134:223169

AB The present invention is directed to multireactivity polymericaptans, star-shaped copolymers and methods of prepg. wherein the polymer comprises a polyvalent mercaptan core and three or more polymeric arms which extend radially from the core. The polyvalent mercaptan core comprises three or more thiol groups, wherein at least two of the thiol groups are of different reactivities, such that the core is of differential reactivity. These multifunctional thiols, which will be referred to as cores of differential reactivity, act as chain transfer agents in a free radical polymn. process. Telomers prepd. using the polymericaptans are useful in pressure-sensitive adhesives.

IT 329745-41-7DP, reaction products with 1-(1-isocyanato-1-Me ethyl)-3-(1-Me ethenyl)benzene 329745-41-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (star; multireactivity polymericaptans, star polymers and methods of prepn.)

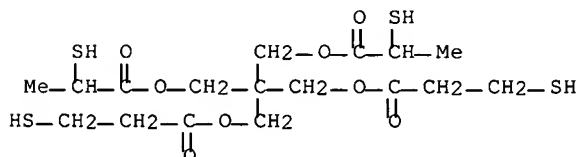
RN 329745-41-7 HCAPLUS

CN 2-Propenoic acid, telomer with 2,2-bis[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl bis(2-mercaptopropanoate), 2-ethylhexyl 2-propenoate and N-(1,1,3,3-tetramethylbutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 307307-51-3

CMF C17 H28 O8 S4



CM 2

CRN 321365-69-9

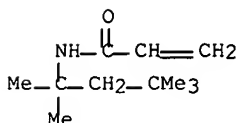
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CCI PMS

CM 3

CRN 4223-03-4

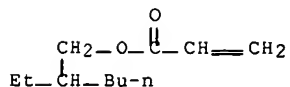
CMF C11 H21 N O



CM 4

CRN 103-11-7

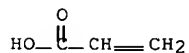
CMF C11 H20 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



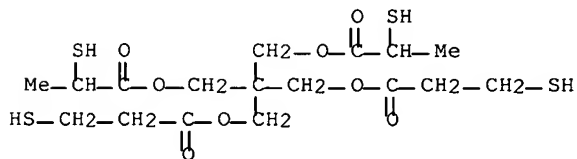
RN 329745-41-7 HCAPLUS

CN 2-Propenoic acid, telomer with 2,2-bis[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl bis(2-mercaptopropanoate), 2-ethylhexyl 2-propenoate and N-(1,1,3,3-tetramethylbutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 307307-51-3

CMF C17 H28 O8 S4



CM 2

CRN 321365-69-9

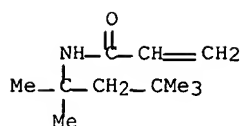
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CCI PMS

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CRN 4223-03-4

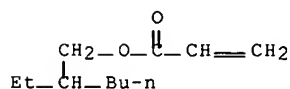
CMF C11 H21 N O



CM 4

CRN 103-11-7

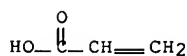
CMF C11 H20 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM C08G075-04

ICS C08G075-00

INCL 528376000

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38

IT 2094-99-7DP, reaction products with acrylate-polymercaptan star telomers 329748-48-3DP, reaction products with 1-(1-isocyanato-1-Me ethyl)-3-(1-Me ethenyl)benzene 329748-48-3P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); **USES (Uses)**  
 (multireactivity polymercaptans, star polymers and methods of prepn.)

IT 329745-40-6P 329745-41-7DP, reaction products with 1-(1-isocyanato-1-Me ethyl)-3-(1-Me ethenyl)benzene 329745-41-7P 329748-47-2DP, reaction products with acrylate-polymercaptan star telomers 329748-47-2P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation); USES (Uses)**  
 (star; multireactivity polymercaptans, star polymers and methods of prepn.)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 4 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:101206 HCAPLUS Full-text

DOCUMENT NUMBER: 134:163497

TITLE: Controlled-architecture polymers, their

preparation, and use as separation media

INVENTOR(S): Klaerner, Gerrit; Petro, Miroslav; Benoit,

Didier; Charmot, Dominique

PATENT ASSIGNEE(S): Symyx Technologies, Inc., USA

SOURCE: PCT Int. Appl., 96 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009204	A2	20010208	WO 2000-US20850	20000731
			<--	
WO 2001009204	A3	20020829		
WO 2001009204	C2	20020926		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6716948	B1	20040406	US 2000-630328	20000731
			<--	
US 2006128917	A1	20060615	US 2004-775672	20040210
PRIORITY APPLN. INFO.:			US 1999-146936P	P 19990731
			<--	
			US 2000-630328	A1 20000731

OTHER SOURCE(S): MARPAT 134:163497

AB Controlled architecture polymers of acrylamide type monomers are prepd. in living-type or semi-living-type free radical polymn., with the architecture preferably being other than linear, such as star, branched, grafted or hyper-branched. The controlled architecture polymers have high wt.-av. mol. wt. and low viscosities, which make them particularly useful in replaceable capillary electrophoresis sepn. media for biol. mols., such as DNA fragments.

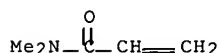
IT 55867-13-5P, N,N-Dimethylacrylamide-N,N'-methylenebisacrylamide copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation) (branched; in manuf. of controlled-architecture polymers used as sepn. media)

RN 55867-13-5 HCAPLUS

CN 2-Propenamide, N,N-dimethyl-, polymer with N,N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME)

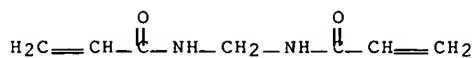
CM 1

CRN 2680-03-7  
 CMF C5 H9 N O



CM 2

CRN 110-26-9  
 CMF C7 H10 N2 O2

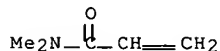


IT 26793-34-0P, Poly(N,N-dimethylacrylamide)  
 RL: BUU (Biological use, unclassified); IMF (Industrial  
 manufacture); BIOL (Biological study); **PREP (Preparation)**;  
**USES (Uses)**  
 (linear, multi-arm, star or  
 hyperbranched; in manuf. of controlled-architecture  
 polymers used as sepn. media)  
 RN 26793-34-0 HCAPLUS  
 CN 2-Propenamide, N,N-dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2680-03-7

CMF C5 H9 N O



IC ICM C08F020-00  
 CC 35-4 (Chemistry of Synthetic High **Polymers**)  
 Section cross-reference(s): 9  
 IT DNA  
 RL: BUU (Biological use, unclassified); BIOL (Biological study);  
**USES (Uses)**  
 (controlled-architecture polymers, prepn., and use as sepn.  
 media)  
 IT 55867-13-5P, N,N-Dimethylacrylamide-N,N'-  
 methylenebisacrylamide copolymer  
 RL: IMF (Industrial manufacture); **PREP (Preparation)**  
 (branched; in manuf. of controlled-architecture  
 polymers used as sepn. media)  
 IT 325698-10-0D, hydroxyamine-derivs., ethyridenetriphenol-initiated  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (dendritic, initiator; in manuf. of controlled-architecture  
 polymers used as sepn. media)  
 IT 227000-59-1 325468-27-7 325468-28-8 325468-29-9  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (initiator; in manuf. of controlled-architecture polymers used as  
 sepn. media)  
 IT 26793-34-0P, Poly(N,N-dimethylacrylamide)  
 RL: BUU (Biological use, unclassified); IMF (Industrial  
 manufacture); BIOL (Biological study); **PREP (Preparation)**;  
**USES (Uses)**  
 (linear, multi-arm, star or  
 hyperbranched; in manuf. of controlled-architecture  
 polymers used as sepn. media)  
 REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L32 ANSWER 5 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:57238 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:116346  
 TITLE: Use of star-branched polymers in pressure  
 sensitive adhesives  
 INVENTOR(S): Harlan, Robert D.; Schoenberg, Jules E.; Gore,

Christopher G.; Hariharan, Deepak; Shah, Smita  
 M.  
 PATENT ASSIGNEE(S): National Starch and Chemical Investment Holding  
 Corporation, USA  
 SOURCE: U.S., 12 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6177540	B1	20010123	US 1998-190157	199811 12
WO 2001094490	A1	20011213	WO 2000-US15108	200006 02

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,  
 CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,  
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1290102 A1 20030312 EP 2000-936446

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL  
 PRIORITY APPLN. INFO.: US 1998-190157 A  
 WO 2000-US15108 W  
 199811  
 12  
 200006  
 02

AB This invention relates to pressure sensitive adhesives, and processes of prepg. such  
 adhesives, comprising random star polymers which are crosslinked by reaction with  
 multifunctional crosslinking agent. The multifunctional crosslinking agent comprises  
 sol. metal compds. selected from the group consisting of aluminum isopropoxide,  
 titanium ester, chelated aluminum esters and chelated titanium esters. These adhesives  
 can be used in coated articles. A polymer was prepd. acrylic acid, 2-ethylhexyl  
 acrylate, and tert-octyl acrylamide in the presence of a polymercaptopan.

IT 321365-69-9DP, Acrylic acid-2-Ethylhexyl acrylate-tert-Octyl  
 acrylamide copolymer, reaction products with polymercaptopans  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)

(star; use of star-branched  
 polymers in pressure sensitive adhesives)

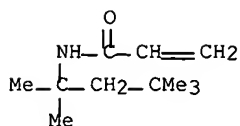
RN 321365-69-9 HCAPLUS

CN 2-Propenoic acid, polymer with 2-ethylhexyl 2-propenoate and  
 N-(1,1,3,3-tetramethylbutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 4223-03-4

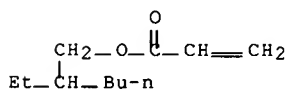
CMF C11 H21 N O



CM 2

CRN 103-11-7

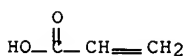
CMF C11 H20 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



IC ICM C08G063-68

ICS C08G075-00; C08G075-04; B31B031-00; C08J007-04

INCL 528364000

CC 35-4 (Chemistry of Synthetic High **Polymers**)

Section cross-reference(s): **38**

IT Polymers, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); **USES (Uses)**

(star-branched; use of star-branched polymers in pressure sensitive adhesives)

IT 7575-23-7DP, Pentaerythritol tetrakis(3-mercaptopropionate), reaction products with acrylic polymers 30705-21-6DP, Acrylic acid-2-ethylhexyl acrylate-methyl methacrylate copolymer, reaction products with polymercaptans 98125-15-6DP, Acrylic acid-2-ethylhexyl acrylate-methacrylic acid copolymer, reaction products with polymercaptans 307307-51-3DP, reaction products with acrylic polymers **321365-69-9DP**, Acrylic acid-2-Ethylhexyl acrylate-tert-Octyl acrylamide copolymer, reaction products with polymercaptans

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**

(star; use of star-branched polymers in pressure sensitive adhesives)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 6 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:784322 HCAPLUS Full-text

DOCUMENT NUMBER: 132:24065

TITLE: Methods for manufacture of paper and cardboard and for manufacture of retention and dewatering

agents  
INVENTOR(S): Hund, Rene; Jehn-Rendu, Christian  
PATENT ASSIGNEE(S): SNF S.A., Fr.  
SOURCE: PCT Int. Appl., 55 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9963159	A1	19991209	WO 1999-FR1278	19990601
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FR 2779452	A1	19991210	FR 1998-7144	19980604
FR 2779452	B1	20000811		
CA 2334196	AA	19991209	CA 1999-2334196	19990601
AU 9940439	A1	19991220	AU 1999-40439	19990601
EP 1092064	A1	20010418	EP 1999-923647	19990601
EP 1092064	B1	20031119		
R: AT, DE, FR, GB, IT, SE, FI				
JP 2002517626	T2	20020618	JP 2000-552347	19990601
AT 254693	E	20031215	AT 1999-923647	19990601
US 2003150575	A1	20030814	US 2002-228093	20020827
US 2004040683	A1	20040304	US 2003-653288	20030903
PRIORITY APPLN. INFO.:			FR 1998-7144	A 19980604
			WO 1999-FR1278	W 199906



01

&lt;--

US 2001-701556

B1

200103

16

US 2002-228093

B1

200208

27

AB The method for paper manuf. comprises the use of a branched acrylic polymer as retention agent and bentonite or kaolin as secondary retention agent (dual type system) and which are introduced into the pulp sequentially with an intermediate shearing step. The acrylic polymer is prepd. by water-in-oil inverse emulsion polymn., and is a copolymer of acrylamide and an unsatd. ethylenic monomer selected from dimethylaminoethyl acrylate, dimethylaminoethyl methacrylate, quaternized ammonium acrylates or methacrylates with crosslinking agents, e.g., methylenebisacrylamide. The pulps obtained using the agents have improved retention and highly improved drainage and dewatering, suitable for prodn. of paper sheets; the use of the agents results in a decrease of the vol. of bentonite in the white liquor. A branched polymer was prepd. by emulsion polymn. from a mixt. of org. phase comprising Exxsol D100, Span 80, and Hypermer 2296, and aq. phase contg. acrylamide, 2- acryloyloxyethyltrimethylammonium chloride, water, methylenebisacrylamide, sodium bromate, sodium hypophosphite, and Versenex 80. After polymn., the polymer was sepd. and used in processing of a mixt. of kraft pulp and mech. pulp, by mixing and stirring at 1000 rpm, then shearing of the pulp mixt. followed by addn. of bentonite. Paper sheets were fabricated by conventional methods.

IT 104888-38-2P, Acrylamide-(2-acryloyloxyethyl)trimethylammonium chloride-methylenebisacrylamide copolymer 109536-70-1P,

Acrylamide-N,N'-methylenebisacrylamide-N-(3-(trimethylammonio)propyl)acrylamide chloride copolymer

RL: IMF (Industrial manufacture); NUU (Other use, unclassified);

PREP (Preparation); USES (Uses)

(manuf. of **branched** acrylic polymers and use as retention agent with bentonite in pulps for paper and cardboard manuf.)

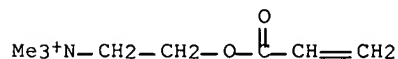
RN 104888-38-2 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with N,N'-methylenebis[2-propenamide] and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . C1

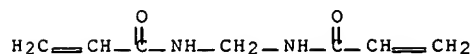


● Cl<sup>-</sup>

CM 2

CRN 110-26-9

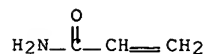
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1

CMF C3 H5 N O



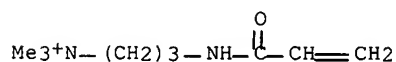
RN 109536-70-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]-, chloride, polymer with N,N'-methylenebis[2-propenamide] and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 45021-77-0

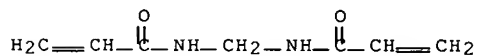
CMF C9 H19 N2 O . Cl



CM 2

CRN 110-26-9

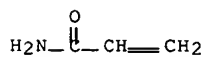
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1

CMF C3 H5 N O



IC ICM D21H023-76

ICS D21H023-14; D21H021-10; D21H017-37; D21H017-68

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 35

IT Paraffin oils

RL: NUU (Other use, unclassified); **USES (Uses)**

(Exxsol D100, emulsion polymn. medium; manuf. of branched acrylic polymers and use as retention agent with bentonite in pulps for paper and cardboard manuf.)

IT Bentonite, uses  
 Kaolin, uses  
 RL: NUU (Other use, unclassified); **USES (Uses)**  
 (manuf. of branched acrylic polymers and use as retention agent  
 with bentonite in pulps for paper and cardboard manuf.)

IT 1338-43-8, Span 80  
 RL: NUU (Other use, unclassified); **USES (Uses)**  
 (Exxsol D100, emulsion polymn. medium; manuf. of branched acrylic  
 polymers and use as retention agent with bentonite in pulps for  
 paper and cardboard manuf.)

IT 7681-53-0, Sodium hypophosphite 7789-38-0, Sodium bromate  
 RL: NUU (Other use, unclassified); **USES (Uses)**  
 (emulsion polymn. medium; manuf. of branched acrylic polymers and  
 use as retention agent with bentonite in pulps for paper and  
 cardboard manuf.)

IT 104888-38-2P, Acrylamide-(2-acryloyloxyethyl)trimethylammoni-  
 um chloride-methylenebisacrylamide copolymer 109536-70-1P,  
 Acrylamide-N,N'-methylenebisacrylamide-N-(3-  
 (trimethylammonio)propyl)acrylamide chloride copolymer  
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified);  
**PREP (Preparation); USES (Uses)**  
 (manuf. of **branched** acrylic polymers and use as  
 retention agent with bentonite in pulps for paper and cardboard  
 manuf.)

IT 140-01-2, Versenex 80 187041-94-7, Hypermer 2296  
 RL: NUU (Other use, unclassified); **USES (Uses)**  
 (nonionic surfactant, emulsion polymn. medium; manuf. of branched  
 acrylic polymers and use as retention agent with bentonite in  
 pulps for paper and cardboard manuf.)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L32 ANSWER 7 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:566730 HCAPLUS Full-text  
 DOCUMENT NUMBER: 131:299762  
 TITLE: Self-condensing vinyl polymerization of  
 acrylamide  
 AUTHOR(S): Zhang, Xi; Liu, Wei Hong; Chen, Yong Ming; Gong,  
 Ai Jun; Chen, Chuan Fu; Xi, Fu  
 CORPORATE SOURCE: Polymer Chemistry Laboratory, Institute  
 Chemistry, Chinese Academy Sciences, Beijing,  
 100080, Peop. Rep. China  
 SOURCE: Polymer Bulletin (Berlin) (1999),  
 43(1), 29-34  
 CODEN: POBUDR; ISSN: 0170-0839  
 PUBLISHER: Springer-Verlag  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A novel approach to branched polyacrylamide was described. The branched structure  
 resulted from the amidyl radicals which were formed by the reaction of amide groups  
 with Cu(III) of potassium diperiodatocuprate, K5[Cu(HIO6)2], in alk. medium and capable  
 of initiating the vinyl polymn. of acrylamide monomer. The obtained polymer was  
 characterized by 1H NMR, FT-IR, and intrinsic viscosity measurements.

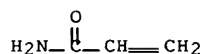
IT 9003-05-8P, Polyacrylamide  
 RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
**(Preparation)**  
 (**branched**; prepn. of **branched** polyacrylamide  
 by self-condensing vinyl polymn. in presence of  
 diperiodatocuprate)

RN 9003-05-8 HCAPLUS

CN 2-Propenamide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-06-1  
 CMF C3 H5 N O



CC 35-4 (Chemistry of Synthetic High **Polymers**)  
 IT 9003-05-8P, Polyacrylamide  
 RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
**(Preparation)**  
 (branched; prepn. of branched polyacrylamide  
 by self-condensing vinyl polymn. in presence of  
 diperiodatocuprate)  
 IT 247030-21-3  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (prepn. of branched polyacrylamide by self-condensing vinyl  
 polymn. in presence of diperiodatocuprate)  
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

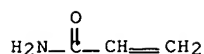
L32 ANSWER 8 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:559073 HCAPLUS Full-text  
 DOCUMENT NUMBER: 132:180980  
 TITLE: Hyperbranched poly(acrylic acid) grafts on  
 polyethylene; substrates for synthesis of  
 functionally elaborate surfaces  
 AUTHOR(S): Tao, Guoliang; Franchina, Justine G.;  
 Bergbreiter, David E.  
 CORPORATE SOURCE: Department of Chemistry, Texas A&M University,  
 College Station, TX, 77842-3012, USA  
 SOURCE: Polymer Preprints (American Chemical Society,  
 Division of Polymer Chemistry) (1999),  
 40(2), 805-806  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer  
 Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Chem. leading to easily derivatized functional grafts on polyethylene is discussed. In  
 this chem., poly(tert-Bu acrylate) is first attached to an oxidized polyethylene film.  
 Hydrolysis of the tert-Bu esters then produces a film with poly(acrylic acid) grafts.  
 Although this initial graft is present at low d., repetition of this process through 2-  
 4 more cycles produces a heavily grafted polyethylene similar to those films produced  
 for hyperbranched poly(acrylic acid) grafts on gold. The resulting grafts on  
 polyethylene are substrates for further modification with hydrogen bonding, radical  
 grafting, or amidation of the film followed by ionic assembly. The poly(acrylic acid)  
 grafts are reduced with BH3 to form a poly(allyl alc.) equiv., from which radical  
 grafting can take place. More extensive grafting occurs from a hyperbranched surface  
 than from an oxidized surface.

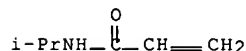
IT 9003-05-8P 25189-55-3P  
 RL: SPN (Synthetic preparation); **PREP (Preparation)**  
 (assembled with oxidized polyethylene; substrates for synthesis  
 of functionally elaborate surfaces in prepn. of  
 hyperbranched poly(acrylic acid) grafts on polyethylene)  
 RN 9003-05-8 HCAPLUS  
 CN 2-Propenamide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-06-1  
 CMF C3 H5 N O



RN 25189-55-3 HCAPLUS  
 CN 2-Propenamide, N-(1-methylethyl)-, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 2210-25-5  
 CMF C6 H11 N O



CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 36, 37  
 IT 9003-05-8P 25189-55-3P  
 RL: SPN (Synthetic preparation); **PREP (Preparation)**  
 (assembled with oxidized polyethylene; substrates for synthesis of functionally elaborate surfaces in prepn. of **hyperbranched** poly(acrylic acid) grafts on polyethylene)  
 IT 7440-57-5, Gold, uses  
 RL: NUU (Other use, unclassified); **USES (Uses)**  
 (substrate; substrates for synthesis of functionally elaborate surfaces in prepn. of hyperbranched poly(acrylic acid) grafts on polyethylene)  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

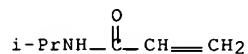
L32 ANSWER 9 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:558792 HCAPLUS Full-text  
 DOCUMENT NUMBER: 132:152385  
 TITLE: The use of responsive polyelectrolyte and hydrogen-bonded polymers in surface chemistry and catalysis  
 AUTHOR(S): Bergbreiter, David E.  
 CORPORATE SOURCE: Department of Chemistry, Texas A&M University, College Station, TX, 77842-3012, USA  
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 244-245  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review, with 16 refs., of the development of polymer-supported reagents and catalysts, with emphasis on polymer formation, polymer surface chem., hyperbranched grafting reactions, hydrogen bonding, hyperbranching for functionalization of oxidized polyethylene, and prodn. of intercalated functionalized films. The prepn. methods can be used to prep. insol. (easily sepd.) "homogeneous" catalysts for org. reactions in biphasic systems.  
 IT 25189-55-3DP, Poly(N-isopropyl) acrylamide, reaction products with dansylethylenediamine  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent); **USES (Uses)**  
 (fluorescent-labeled polymer supports; hydrogen bonding and **hyperbranched** grafting reactions in development of

polymer-supported reagents and catalysts)  
 RN 25189-55-3 HCAPLUS  
 CN 2-Propenamide, N-(1-methylethyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2210-25-5  
 CMF C6 H11 N O



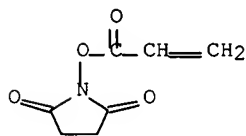
IT 71137-65-ODP, 2-Propenamide, N-(1-methylethyl)-, polymer with 1-[(1-oxo-2-propenyl)oxy]-2,5-pyrrolidinedione, reaction products with aminoalkyl phosphines  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(supports; hydrogen bonding and **hyperbranched** grafting reactions in development of polymer-supported reagents and catalysts)

RN 71137-65-0 HCAPLUS  
 CN 2-Propenamide, N-(1-methylethyl)-, polymer with 1-[(1-oxo-2-propenyl)oxy]-2,5-pyrrolidinedione (9CI) (CA INDEX NAME)

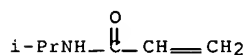
CM 1

CRN 38862-24-7  
 CMF C7 H7 N O4



CM 2

CRN 2210-25-5  
 CMF C6 H11 N O



CC 36-0 (Physical Properties of Synthetic High **Polymers**)  
 Section cross-reference(s): 67  
 IT Polymers, preparation  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (hydrogen-bonded; hydrogen bonding and hyperbranched grafting reactions in development of polymer-supported reagents and catalysts)  
 IT Dendritic polymers  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation);

PREP (Preparation); RACT (Reactant or reagent); **USES (Uses)**  
 (hyperbranched, supports; hydrogen bonding and hyperbranched  
 grafting reactions in development of polymer-supported reagents  
 and catalysts)

IT Dendritic polymers  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation);  
 PREP (Preparation); RACT (Reactant or reagent); **USES (Uses)**  
 (supports; hydrogen bonding and hyperbranched grafting reactions  
 in development of polymer-supported reagents and catalysts)

IT 25189-55-3DP, Poly(N-isopropyl) acrylamide, reaction  
 products with dansylethylenediamine 35060-08-3DP,  
 Dansylethylenediamine, reaction products with poly(N-  
 isopropylacrylamide)  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation);  
 PREP (Preparation); RACT (Reactant or reagent); **USES**  
 (Uses)  
 (fluorescent-labeled polymer supports; hydrogen bonding and  
 hyperbranched grafting reactions in development of  
 polymer-supported reagents and catalysts)

IT 79-10-7DP, Acrylic acid, reaction products with oxidized  
 polyethylene 9002-88-4DP, Polyethylene, oxidized, acrylic  
 acid-functionalized 16605-03-1DP, 1-Propanamine,  
 3-(diphenylphosphino)-, reaction products with isopropylacrylamide-  
 acryloxysuccinimide copolymer 71137-65-0DP, 2-Propenamide,  
 N-(1-methylethyl)-, polymer with 1-[(1-oxo-2-propenyl)oxy]-2,5-  
 pyrrolidinedione, reaction products with aminoalkyl phosphines  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation);  
 PREP (Preparation); RACT (Reactant or reagent); **USES**  
 (Uses)  
 (supports; hydrogen bonding and hyperbranched grafting  
 reactions in development of polymer-supported reagents and  
 catalysts)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L32 ANSWER 10 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:211091 HCAPLUS Full-text

DOCUMENT NUMBER: 130:352687

TITLE: One-pot synthesis of polyamide dendrimers

AUTHOR(S): Yamakawa, Yoshitaka; Ueda, Mitsuru; Takeuchi,  
 Kazuhiko; Asai, Michihiko

CORPORATE SOURCE: Joint Research Center for Precision  
 Polymerization, Japan Chemical Innovation  
 Institute, Tsukuba, 305-8565, Japan

SOURCE: Polymer Preprints (American Chemical Society,  
 Division of Polymer Chemistry) (1999),  
 40(1), 91-92

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer  
 Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of dendrimers involve a tedious stepwise process such as protection-  
 deprotection and extensive purifn. steps. A convenient one-pot synthesis of polyamide  
 dendrimers without using these process has been developed. Trimesic acid was activated  
 by a condensing agent di-Ph (2,3-dihydro-2-thioxo-3- benzoxazolyl)phosphonate (DBOP)  
 and condensed with AB2 type monomer (H2N-R-(COOH)2) (prepd. from 5-aminoisophthalic  
 acid and 4-nitrocinnamoyl chloride). These activation and condensation processes were  
 repeated alternately, and finally the outer dendrimer carboxylic groups were end-capped  
 with p-anisidine. The 1st-5th generation dendrimers were synthesized within a few  
 hours by one-pot approach. The dendrimers have mol. wts. close to calcd. value and  
 Mw/Mn 1.2-1.4.

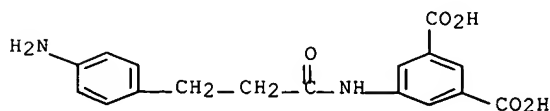
IT 224587-16-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (hyperbranched, oligomeric; one-pot synthesis of  
 polyamide dendrimers in presence of di-Ph

(dihydrothioxobenzoxazolyl)phosphonate condensing agent)  
RN 224587-16-0 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, 5-[[3-(4-aminophenyl)-1-oxopropyl]amino]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 224587-15-9  
CMF C17 H16 N2 O5



CC 35-5 (Chemistry of Synthetic High **Polymers**)  
IT 111160-56-6, Diphenyl (2,3-dihydro-2-thioxo-3-benzoxazolyl)phosphonate  
RL: CAT (Catalyst use); **USES (Uses)**  
(condensing agent; one-pot synthesis of polyamide dendrimers in presence of di-Ph (dihydrothioxobenzoxazolyl)phosphonate condensing agent)  
IT 224587-16-0P  
RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(**hyperbranched**, oligomeric; one-pot synthesis of polyamide dendrimers in presence of di-Ph (dihydrothioxobenzoxazolyl)phosphonate condensing agent)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 11 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1998:744878 HCAPLUS Full-text  
DOCUMENT NUMBER: 130:59084  
TITLE: Oil-based ink for making ink jet-type lithographic printing plate  
INVENTOR(S): Kato, Eiichi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10306244	A2	19981117	JP 1997-168146	19970610
				<--
PRIORITY APPLN. INFO.:				JP 1997-63800 A 19970303
				<--

AB The oil-based ink contains dispersion-stabilizing resin particles in a nonaq. solvent, wherein the resin particles are made from an A-B-type star block copolymer consisting of a monofunctional monomer (A) and a block (B) represented by [a1CH-Ca2(X1-Y1)] (a 1,2 = H, halo, cyano, etc.; X1 = COO, OCO, etc.; Y1 = C≥8 aliph.). The block (A) and (B) are sol. in the nonaq. solvent but becoming insol. upon polymn. The ink provided excellent redispersibility, storage stability, and printing fastness.  
IT 159967-55-2P



RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**

(**star**; oil-based ink for making ink jet-type lithog. printing plate)

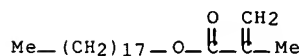
RN 159967-55-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with N,N-dimethyl-2-propenamide and octadecyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

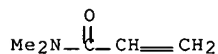
CMF C22 H42 O2



CM 2

CRN 2680-03-7

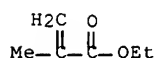
CMF C5 H9 N O



CM 3

CRN 97-63-2

CMF C6 H10 O2



IC ICM C09D011-00

ICS B41C001-10; B41M005-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): **35**, **38**, **42**

IT 155313-00-1

RL: MOA (Modifier or additive use); **USES (Uses)**

(oil-based ink for making ink jet-type lithog. printing plate)

IT 9003-20-7P, Vinyl acetate homopolymer 29406-88-0P, Octadecylvinyl ether-vinyl acetate copolymer 55778-35-3P, Octadecyl methacrylate-vinyl acetate copolymer 85533-57-9P, Hexadecyl methacrylate-Vinyl acetate copolymer 113989-22-3P 128921-17-5P 161641-25-4P, Methyl acrylate-methyl methacrylate-octadecyl acrylate copolymer 178630-10-9P, Vinyl acetate-vinyl oleate copolymer 212839-66-2P 212839-68-4P 212839-69-5P 212839-70-8P 212839-72-0P 212839-73-1P 213263-27-5P 216878-38-5P 216878-45-4P 216878-50-1P 216878-70-5P 216878-80-7P 216878-83-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**

(oil-based ink for making ink jet-type lithog. printing plate)

IT 150551-83-0 150551-89-6 150551-92-1 150551-93-2 150551-97-6

154340-06-4 155161-59-4 159967-38-1 159967-39-2 159967-41-6  
159967-42-7 159967-43-8 216877-91-7

RL: MOA (Modifier or additive use); **USES (Uses)**

(polymn. initiator; oil-based ink for making ink jet-type lithog.  
printing plate)

IT 150469-59-3P 159967-35-8P, Dodecyl methacrylate-ethyl  
acrylate-methyl methacrylate block copolymer 159967-36-9P, Methyl  
acrylate-methyl methacrylate-stearyl methacrylate block copolymer  
159967-46-1P 159967-47-2P 159967-48-3P 159967-49-4P  
159967-50-7P 159967-51-8P 159967-53-0P 159967-54-1P  
159967-55-2P 159967-56-3P 216878-23-8P 216988-37-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); **PREP (Preparation)**; **USES (Uses)**

(star; oil-based ink for making ink jet-type lithog.  
printing plate)

L32 ANSWER 12 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:635303 HCAPLUS Full-text

DOCUMENT NUMBER: 129:303741

TITLE: Antistatic and antiblocking polyester films

INVENTOR(S): Okada, Shinichiro; Ishikawa, Toshifumi; Fukuda,  
Masayuki

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10258251	A2	19980929	JP 1997-66328	199703 19
			<--	
JP 3527051	B2	20040517		
PRIORITY APPLN. INFO.:			JP 1997-66328	199703 19
			<--	

AB Title films, useful for overhead projectors, are prepd. by coating polyester films with  
comps. contg. branched alkyl-contg. phosphate ester salt antistatic agents 5-40,  
surfactants with HLB of  $\leq 12$  1-20, acrylic and/or polyester binders 40-90, and fine  
particles with av. diam. of 10-500 nm 3-25%, drying, and drawing. A PET film was drawn  
in the machine direction, coated with an aq. soln. contg. ethylene glycol-isophthalic  
acid-polyoxyethylene bisphenol A ether-5-sodiosulfonatoisophthalic acid-terephthalic  
acid copolymer, diisoamyl K phosphate, polyoxyethylene nonyl ether with HLB 11.3, and  
60-nm crosslinked acrylic resin particles, dried, and drawn in the transverse direction  
to form a film showing good blocking resistance under 60°, 80% relative humidity (RH),  
and 50-kg/cm<sup>2</sup> load and adhesion to printing toner (60°, 80% RH, over 17 h) with  
resistivity 6 + 1010  $\Omega$ -cm.

IT 163617-34-3P, Ethyl acrylate-2-hydroxyethyl  
methacrylate-methyl methacrylate-N-methylolmethacrylamide copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); **PREP (Preparation)**  
; **USES (Uses)**

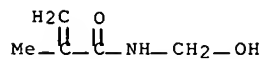
(coating binders; branched alkyl phosphate ester salt-  
and specific surfactant-contg. aq. coatings for polyester films  
for antistatic and antiblocking ability)

RN 163617-34-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
ethyl 2-propenoate, N-(hydroxymethyl)-2-methyl-2-propenamide and  
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

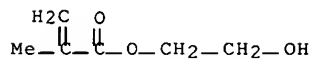
CM 1

CRN 923-02-4  
CMF C5 H9 N O2



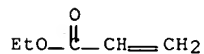
CM 2

CRN 868-77-9  
CMF C6 H10 O3



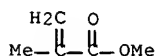
CM 3

CRN 140-88-5  
CMF C5 H8 O2



CM 4

CRN 80-62-6  
CMF C5 H8 O2



- IC ICM B05D005-12  
ICS B32B007-02; B32B027-18; B32B027-36; C09K003-16  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38, 74  
IT Acrylic polymers, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation);  
**USES (Uses)**  
(coating binders; branched alkyl phosphate ester salt- and  
specific surfactant-contg. aq. coatings for polyester films for  
antistatic and antiblocking ability)  
IT 67953-22-4 214605-04-6  
RL: MOA (Modifier or additive use); **USES (Uses)**  
(branched alkyl phosphate ester salt- and specific  
surfactant-contg. aq. coatings for polyester films for antistatic  
and antiblocking ability)  
IT 9016-45-9, Polyethylene glycol nonylphenyl ether 39587-22-9,

Polyethylene glycol nonyl ether  
RL: MOA (Modifier or additive use); PRP (Properties); **USES**  
(Uses)

(branched alkyl phosphate ester salt- and specific  
surfactant-contg. aq. coatings for polyester films for antistatic  
and antiblocking ability)

IT 84189-56-0P 163617-34-3P, Ethyl acrylate-2-hydroxyethyl  
methacrylate-methyl methacrylate-N-methylolmethacrylamide copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); **PREP (Preparation)**  
; **USES (Uses)**

(coating binders; **branched** alkyl phosphate ester salt-  
and specific surfactant-contg. aq. coatings for polyester films  
for antistatic and antiblocking ability)

L32 ANSWER 13 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:448256 HCAPLUS Full-text

DOCUMENT NUMBER: 129:189722

TITLE: Branching in radical polymerization of  
acrylamide

AUTHOR(S): Fanood, M. Hossein Rafi'ee

CORPORATE SOURCE: Department of Chemistry, Faculty of Sciences,  
University of Tehran, Tehran, Iran

SOURCE: Iranian Polymer Journal (1998), 7(1),  
59-65

CODEN: IPJOFF; ISSN: 1026-1265

PUBLISHER: Polymer Research Center of Iran

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Acrylamide was polymd. at 40° and 80° in presence of 4,4'-azobis-4-cyanovaleric acid by  
radical polymn. to high conversions. The polyacrylamides were isolated by pptn. in  
methanol. After drying, the limiting viscosity nos. and apparent mol. wts. of  
polyacrylamides were detd. viscometrically by several empirical equations in distd.  
water and also by GPC. The dependence of limiting viscosity no. on percentage  
conversion is discussed, and the significance of polymer branching at 40° and 80° is  
assessed.

IT 9003-05-8P, Polyacrylamide

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(**branching** in radical polymn. of acrylamide in presence  
of azobiscyanovaleric acid catalysts)

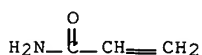
RN 9003-05-8 HCAPLUS

CN 2-Propenamide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-06-1

CMF C3 H5 N O



CC 35-4 (Chemistry of Synthetic High **Polymers**)

IT 9003-05-8P, Polyacrylamide

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(**branching** in radical polymn. of acrylamide in presence  
of azobiscyanovaleric acid catalysts)

IT 2638-94-0, 4,4'-Azobis-4-cyanovaleric acid

RL: CAT (Catalyst use); **USES (Uses)**

(catalysts; branching in radical polymn. of acrylamide in  
presence of azobiscyanovaleric acid catalysts)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L32 ANSWER 14 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:221302 HCAPLUS Full-text

DOCUMENT NUMBER: 128:283141

TITLE: Novel branched block copolymers from  
poly(vinylpyridine) by chromium allyl compounds

AUTHOR(S): Novakov, Petar P.; Kuckling, Dirk; Fedorova,  
Ljubov; Adler, Hans Juergen P.

CORPORATE SOURCE: Institute Macromolecular Chemistry Textile  
Chemistry, Dresden University Technology,  
Dresden, D-01062, Germany

SOURCE: Macromolecular Symposia (1998),  
128(International Symposium on New Approaches in  
Polymer Synthesis and Macromolecular Formation,  
1997), 195-201

CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Huethig & Wepf Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Novel branched block copolymers from poly(vinylpyridine) are formed by Cr allyl compds.  
The present work shows results for the homopolymn. of vinylpyridine (VP),  
dimethylacrylamide (DMAA), tert-Bu acrylate (t-BA) as well as the graft copolymn. of  
poly(vinylpyridine) (PVP), using tris( $\pi$ -allyl)chromium (TPC) as initiator. PVP  
activated by TPC was used for grafting with DMAA-grafting from. On the other hand  
living PDMAA polymd. by TPC, was able to react with PVP chain-grafting onto.

IT 26793-34-0P, Poly(dimethylacrylamide) 205758-56-1P  
, N,N-Dimethylacrylamide-2-vinylpyridine graft copolymer  
205758-58-3P, N,N-Dimethylacrylamide-4-vinylpyridine graft  
copolymer

RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
(Preparation)

(prepn. of branched block polymers from  
poly(vinylpyridine) in presence of chromium allyl compds.)

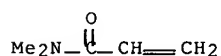
RN 26793-34-0 HCAPLUS

CN 2-Propenamide, N,N-dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2680-03-7

CMF C5 H9 N O



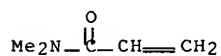
RN 205758-56-1 HCAPLUS

CN 2-Propenamide, N,N-dimethyl-, polymer with 2-ethenylpyridine, graft  
(9CI) (CA INDEX NAME)

CM 1

CRN 2680-03-7

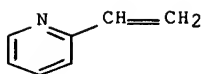
CMF C5 H9 N O



CM 2

CRN 100-69-6

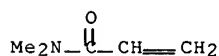
CMF C7 H7 N



RN 205758-58-3 HCAPLUS  
CN 2-Propenamide, N,N-dimethyl-, polymer with 4-ethenylpyridine, graft  
(9CI) (CA INDEX NAME)

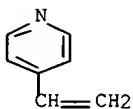
CM 1

CRN 2680-03-7  
CMF C5 H9 N O



CM 2

CRN 100-43-6  
CMF C7 H7 N



CC 35-8 (Chemistry of Synthetic High **Polymers**)  
IT 12082-46-1, Tris( $\pi$ -allyl)chromium  
RL: CAT (Catalyst use); **USES (Uses)**  
(prepn. of branched block polymers from poly(vinylpyridine) in presence of chromium allyl compds.)  
IT 25014-15-7P, Poly(2-vinylpyridine) 25232-41-1P,  
Poly(4-vinylpyridine) **26793-34-0P**,  
Poly(dimethylacrylamide) **205758-56-1P**,  
N,N-Dimethylacrylamide-2-vinylpyridine graft copolymer  
**205758-58-3P**, N,N-Dimethylacrylamide-4-vinylpyridine graft copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. of **branched** block polymers from poly(vinylpyridine) in presence of chromium allyl compds.)

L32 ANSWER 15 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:433482 HCAPLUS Full-text

DOCUMENT NUMBER: 127:35254

TITLE: Enantioselective Permeation of Amino Acids  
across Membranes Prepared from 3 $\alpha$ -Helix  
Bundle Polyglutamates with Oxyethylene Chains

AUTHOR(S): Inoue, Kenzo; Miyahara, Akiko; Itaya, Tomoyuki  
CORPORATE SOURCE: Department of Applied Chemistry Faculty of  
Engineering, Ehime University, Matsuyama, 790,  
Japan

SOURCE: Journal of the American Chemical Society (

1997), 119(26), 6191-6192  
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

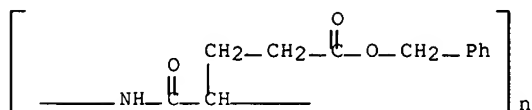
AB Hexaarmed poly( $\gamma$ -benzyl L-glutamates) with diethylene and triethylene glycol monomethyl ether functionalities are prepd. by initiating the polymn. on hexakis(4-(aminomethyl)phenoxy)cyclotriphosphazene followed by displacement of some of the benzyl groups with the di- and triethylene glycol ethers. The hexaarmed polyglutamates have a right-handed  $\alpha$ -helical structure. The short oxyethylene chains could assemble side to side to form a relatively narrow channel along the  $\alpha$ -helical structure. The oxyethylene-functionalized star polyglutamates were supported on Teflon to form a membrane which functioned as an excellent enantioselective membrane for Trp, Phe, and Tyr. The structural change for linear to star-shaped polymers improve the functionality of mol. recognition.

IT 25038-53-3P,  $\gamma$ -Benzyl L-glutamate homopolymer, sru  
190672-69-6P 190793-08-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);  
TEM (Technical or engineered material use); **PREP**  
(Preparation); RACT (Reactant or reagent); **USES** (Uses)  
(star-branched; prepn. and amino acid  
enantioselective permeation of short chain oxyethylene-  
functionalized poly(benzyl L-glutamate) membranes)

RN 25038-53-3 HCAPLUS

CN Poly[imino[(2S)-1-oxo-2-[3-oxo-3-(phenylmethoxy)propyl]-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



RN 190672-69-6 HCAPLUS

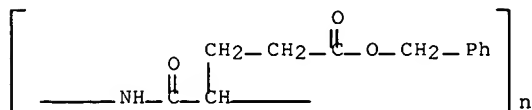
CN Poly[imino[1-oxo-2-[3-oxo-3-(phenylmethoxy)propyl]-1,2-ethanediyl]],  
2-(2-methoxyethoxy)ethyl ester, (S)- (9CI) (CA INDEX NAME)

CM 1

CRN 25038-53-3

CMF (C12 H13 N O3)n

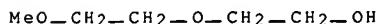
CCI PMS



CM 2

CRN 111-77-3

CMF C5 H12 O3



RN 190793-08-9 HCAPLUS

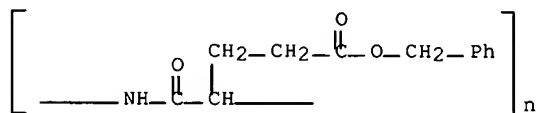
CN Poly[imino[(2S)-1-oxo-2-[3-oxo-3-(phenylmethoxy)propyl]-1,2-ethanediyl]], 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 25038-53-3

CMF (C12 H13 N O3)n

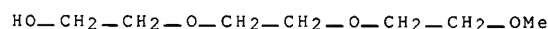
CCI PMS



CM 2

CRN 112-35-6

CMF C7 H16 O4



CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 34, 37, 80

IT Polymers, uses

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);  
TEM (Technical or engineered material use); PREP (Preparation); RACT  
(Reactant or reagent); **USES (Uses)**  
(star-branched; prepn. and amino acid enantioselective permeation  
of short chain oxyethylene-functionalized poly(benzyl  
L-glutamate) membranes)

IT 25014-27-1P,  $\gamma$ -Benzyl L-glutamate homopolymer  
25038-53-3P,  $\gamma$ -Benzyl L-glutamate homopolymer, sru  
190672-68-5P 190672-69-6P 190793-07-8P  
190793-08-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);  
TEM (Technical or engineered material use); **PREP**  
(Preparation); RACT (Reactant or reagent); **USES (Uses)**  
(star-branched; prepn. and amino acid  
enantioselective permeation of short chain oxyethylene-  
functionalized poly(benzyl L-glutamate) membranes)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L32 ANSWER 16 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:223892 HCAPLUS Full-text

DOCUMENT NUMBER: 126:212534

TITLE: Redox initiator for radical polymerization and  
its use

INVENTOR(S): Tauer, Klaus; Rosengarten, Lutz

PATENT ASSIGNEE(S): Max-Planck-Gesellschaft zur Foerderung der  
Wissenschaften e.V., Germany

SOURCE: Ger. Offen., 5 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19528585	A1	19970206	DE 1995-19528585	19950803
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DE 19528585	C2	20020314	DE 1995-19528585	19950803

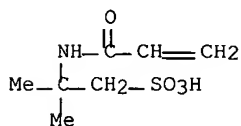
PRIORITY APPLN. INFO.:

AB The title initiator, useful for radical polymn. of mono- or polyunsatd. monomers in aq. systems, for the manuf. or branched polymers where a polymer serves as a component of the initiator system, and for the manuf. of graft polymers and modification of latexes, comprises Ce(IV) ion source and an org. sulfonic acid or its deriv. Thus, 1 part benzene-1,3-disulfonic acid Na salt was dissolved in 100 parts H<sub>2</sub>O, the soln. is bubbled with N<sub>2</sub>, 3 parts Me methacrylate was added, the mixt. was stirred for 10 min, a soln. of 1.096 part Ce(IV) ammonium nitrate in 2 parts H<sub>2</sub>O was added and the whole was stirred for 10 h to give 2.4 parts PMMA with Mw 1.5 + 105 g/mol (GPC).

IT 27119-07-9P, 2-Acrylamido-2-methylpropanesulfonic acid polymer  
 RL: IMF (Industrial manufacture); **PREP (Preparation)**  
 (branched; org. sulfonate-cerium ion as redox initiator for radical polymn. and grafting and latex modification)  
 RN 27119-07-9 HCAPLUS  
 CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8  
 CMF C7 H13 N O4 S



IC ICM C08F004-40  
 ICS C08F012-30; C08F020-58; C08F028-02; C08F002-16  
 ICA C08F291-00; C08F293-00  
 CC 35-3 (Chemistry of Synthetic High **Polymers**)  
 IT Sulfonic acids, uses  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (derivs., catalysts contg.; org. sulfonate-cerium ion as redox initiator for radical polymn. and grafting and latex modification)  
 IT 27119-07-9P, 2-Acrylamido-2-methylpropanesulfonic acid polymer 62744-35-8P, Sodium styrenesulfonate polymer  
 RL: IMF (Industrial manufacture); **PREP (Preparation)**  
 (branched; org. sulfonate-cerium ion as redox initiator for radical polymn. and grafting and latex modification)  
 IT 75-75-2, Methanesulfonic acid 657-84-1, Sodium 4-toluenesulfonate 831-59-4, Disodium benzene-1,3-disulfonate 5896-54-8, Sodium pentadecylsulfonate 10139-51-2, Cerium(IV) ammonium nitrate  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (catalyst contg.; org. sulfonate-cerium ion as redox initiator for radical polymn. and grafting and latex modification)

ACCESSION NUMBER: 1997:165166 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:158259  
 TITLE: High-molecular-weight branched polymers  
 containing side-chain ammonium groups and their  
 manufacture  
 INVENTOR(S): Hahn, Mathias; Jaeger, Werner; Cramm, Jeffrey  
 PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der  
 Angewandten Forschung e.V., Germany; Nalco  
 Chemical Co.  
 SOURCE: Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 19524867	A1	19970109	DE 1995-19524867	199507 07
			<--	
DE 19524867	C2	20000803		
WO 9703099	A1	19970130	WO 1996-DE1275	199607 08
			<--	
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6423801	B1	20020723	US 1999-29002	199902 08

PRIORITY APPLN. INFO.:  
 DE 1995-19524867 A 199507  
 07  
 <--  
 WO 1996-DE1275 W 199607  
 08  
 <--

AB Water-sol. polyammonium salts with high-mol. wt. are based on unsatd. quaternary ammonium compds. and suited linear amine group-contg. prepolymers wherein the prepolymer provides the backbone and the ammonium salt is in the side chain of the polymer. The polymers are prepd. by free-radical polymn. of the unsatd. ammonium compds. The polymers are particularly useful in purifn. of contaminated water. Thus, diallyldimethylammonium chloride was polymd. with a methylenebisacrylamide-piperazine prepolymer to give a branched polymer contg. ammonium groups in the side chains with 97.5% conversion and relative viscosity 8.54 for a 1% soln. of the isolated polymer in 1N NaCl.

IT 112209-75-3P 186962-02-7P  
 RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
 (Preparation)

(manuf. of water-sol. high-mol.-wt. **branched** polyamines  
 contg. side-chain ammonium groups)

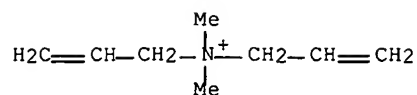
RN 112209-75-3 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer  
 with N-[3-(dimethylamino)propyl]-2-methyl-2-propenamide (9CI) (CA  
 INDEX NAME)

CM 1

CRN 7398-69-8

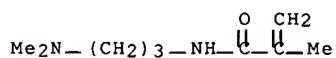
CMF C8 H16 N . Cl



● Cl<sup>-</sup>

CM 2

CRN 5205-93-6  
CMF C9 H18 N2 O

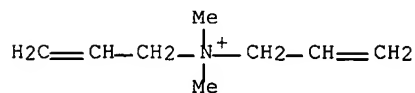


RN 186962-02-7 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer  
with N,N'-methylenebis[2-propenamide] and piperazine (9CI) (CA  
INDEX NAME)

CM 1

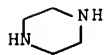
CRN 7398-69-8  
CMF C8 H16 N . Cl



● Cl<sup>-</sup>

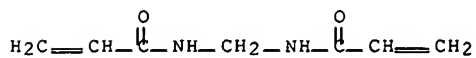
CM 2

CRN 110-85-0  
CMF C4 H10 N2

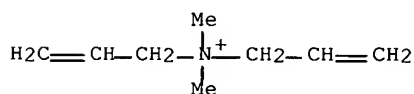


CM 3

CRN 110-26-9  
CMF C7 H10 N2 O2

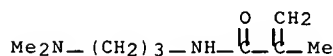


IT 186962-06-1P  
 RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
 (polymn. catalyst; manuf. of water-sol. high-mol.-wt.  
 branched polyamines contg. side-chain ammonium groups)  
 RN 186962-06-1 HCAPLUS  
 CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer  
 with N-[3-(dimethylamino)propyl]-2-methyl-2-propenamide and  
 2-propenamide (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 7398-69-8  
 CMF C8 H16 N . Cl

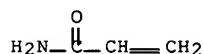


● Cl<sup>-</sup>

CM 2  
 CRN 5205-93-6  
 CMF C9 H18 N2 O



CM 3  
 CRN 79-06-1  
 CMF C3 H5 N O



IC ICM C08F226-02  
 ICS C08F226-04; C02F001-56; C07D207-08  
 ICA C07D295-04  
 ICI C08F226-02, C08F222-02, C08F226-06, C08F220-54  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 35, 61  
 IT 102-71-6DP, polymers with diallyldimethylammonium chloride  
 7398-69-8DP, polymers with triethanolamine 107048-87-3P  
 112209-75-3P 186962-02-7P 186962-03-8P  
 186962-04-9P  
 RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
 (manuf. of water-sol. high-mol.-wt. branched polyamines  
 contg. side-chain ammonium groups)

IT 7727-54-0, Ammonium persulfate  
RL: CAT (Catalyst use); **USES (Uses)**  
(polymn. catalyst; manuf. of water-sol. high-mol.-wt. branched  
polyamines contg. side-chain ammonium groups)

IT 186962-05-0P **186962-06-1P**  
RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
(polymn. catalyst; manuf. of water-sol. high-mol.-wt.  
**branched** polyamines contg. side-chain ammonium groups)

L32 ANSWER 18 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:154953 HCAPLUS Full-text

DOCUMENT NUMBER: 126:157943

TITLE: Water-soluble cationic comb-branched acrylamide  
copolymers with high molecular weight  
INVENTOR(S): Hahn, Mathias; Jaeger, Werner; Cramm, Jeffrey;  
Whipple, Wesley

PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der  
Angewandten Forschung e.V., Germany; Nalco  
Chemical Co.

SOURCE: Ger. Offen., 7 pp.  
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 19524869	A1	19970109	DE 1995-19524869	199507 07
			<--	
DE 19524869	C2	20000504		
WO 9703098	A1	19970130	WO 1996-DE1273	199607 08
			<--	
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6124396	A	20000926	US 1998-42	199803 23

PRIORITY APPLN. INFO.:

<--	
DE 1995-19524868	A
	199507 07
<--	
DE 1995-19524869	A
	199507 07
<--	
WO 1996-DE1273	W
	199607 08
<--	

AB The graft copolymers, useful as flocculating agents or as drainage aids in paper  
manuf., have a cationic copolymer as backbone and polyacrylamide side chains, and are  
prepd. by inverse emulsion polymn. An aq. soln. contg. diallyldimethylammonium  
chloride prepolymer, acrylamide monomer, and NH<sub>4</sub> persulfate was emulsified in Isopar M  
by the use of Span 80, Tween 85, and Hypermer 1083 and polymd. 4 h at 25° to give a  
graft copolymer with reduced viscosity 9.54 dL/g (0.2% in 1N NaCl).

IT **186826-16-4P**, Acrylamide-diallyldimethylammonium chloride  
graft copolymer **186826-18-6P**, Acrylamide-N-[3-  
(dimethylamino)propyl]methacrylamide graft copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**  
 (water-sol. cationic comb-**branched** acrylamide copolymers with high mol. wt.)

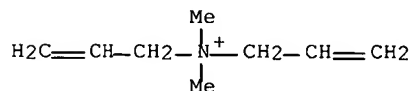
RN 186826-16-4 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide, graft (9CI) (CA INDEX NAME)

CM 1

CRN 7398-69-8

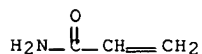
CMF C8 H16 N . Cl



CM 2

CRN 79-06-1

CMF C3 H5 N O



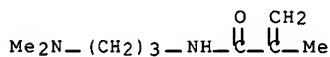
RN 186826-18-6 HCAPLUS

CN 2-Propenamide, N-[3-(dimethylamino)propyl]-2-methyl-, polymer with 2-propenamide, graft (9CI) (CA INDEX NAME)

CM 1

CRN 5205-93-6

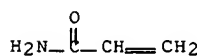
CMF C9 H18 N2 O



CM 2

CRN 79-06-1

CMF C3 H5 N O



IC ICM C08F271-00

ICS C08F226-02; C08F002-22; C02F001-56; C08F220-56

CC 35-4 (Chemistry of Synthetic High **Polymers**)

Section cross-reference(s): 43, 46, 60, 61

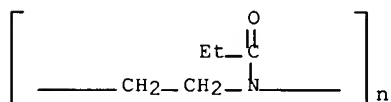
IT 186826-16-4P, Acrylamide-diallyldimethylammonium chloride graft copolymer 186826-18-6P, Acrylamide-N-[3-(dimethylamino)propyl]methacrylamide graft copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**  
 (water-sol. cationic comb-branched acrylamide copolymers with high mol. wt.)

L32 ANSWER 19 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1997:134809 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:144584  
 TITLE: Synthesis of Metal-Centered Star-Shaped Polyoxazolines Using Fe(II) and Ru(II) Tris-bipyridine Derivatives as Multifunctional Initiators  
 AUTHOR(S): Lamba, Jaydeep J. S.; Fraser, Cassandra L.  
 CORPORATE SOURCE: Department of Chemistry, University of Virginia, Charlottesville, VA, 22901, USA  
 SOURCE: Journal of the American Chemical Society (1997), 119(7), 1801-1802  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Polymn. of 2-ethyloxazoline was carried out on a multifunctional living polymn. catalyst, formed in situ from tris[(4,4'-chloromethyl)-2,2'-bipyridine]ruthenium hexafluorophosphate and NaI. Metal-centered star-shaped polymers with low polydispersity were obtained with the metal catalyst serving as a star core. The polymers can be further liberated from the metal.

IT 69488-61-5P  
 RL: SPN (Synthetic preparation); **PREP (Preparation)**  
 (prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

RN 69488-61-5 HCAPLUS  
 CN Poly[[ (1-oxopropyl)imino] (1,2-ethanediy)] (9CI) (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High **Polymers**)

ST ruthenium bipyridine complex catalyst ethyloxazoline polymn; iron bipyridine complex catalyst ethyloxazoline polymn; metal centered star shaped polyethyloxazoline synthesis; multifunctional metal catalyst ethyloxazoline living polymn

IT Polymerization catalysts  
 (living, multifunctional; prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

IT 7681-82-5, Sodium iodide, uses  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (co-catalyst; prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

IT 186654-63-7  
 RL: CAT (Catalyst use); **USES (Uses)**  
 (core/catalyst; prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

IT 186654-51-3 186654-59-1

RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent);

**USES (Uses)**

(core/catalyst; prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

IT 186654-55-7

RL: CAT (Catalyst use); **USES (Uses)**

(model core/initiator; prepn. of Ru- or Fe-centered star-shaped polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

IT 25805-17-8P, 2-Ethylloxazoline homopolymer **69488-61-5P**

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(prepn. of Ru- or Fe-centered **star-shaped** polyoxazolines using Fe(II) and Ru(II) tris-bipyridine complexes as multifunctional initiators)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 20 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:44324 HCAPLUS Full-text

DOCUMENT NUMBER: 126:61766

TITLE: Highly branched methacrylamide polymers as additives for strengthening paper

INVENTOR(S): Shimamoto, Katsuhiko; Tanimoto, Shinichiro; Nabeta, Yoshimori; Hirose, Kunihiro

PATENT ASSIGNEE(S): Arakawa Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08269891	A2	19961015	JP 1996-38696	19960131
			<--	
JP 3487059	B2	20040113		
PRIORITY APPLN. INFO.:			JP 1995-37527	A1 19950201
				<--

AB Title additives can be used at high concn. because of their low viscosity, comprise copolymers of (A) (meth)acrylamide, (B) (meth)allyl-substituted monomers, (C) CH<sub>2</sub>:CR<sub>1</sub>CONR<sub>2</sub>R<sub>3</sub> (R<sub>1</sub> = H, Me; R<sub>2</sub> = H, C<sub>1</sub>-4 linear or branched alkyl; R<sub>3</sub> = C<sub>1</sub>-4 linear or branched alkyl), and optionally (D) anionic, cationic or/and nonionic vinyl monomers. Thus, acrylamide 95, Na methallylsulfonate 3, and N,N-dimethylacrylamide 2 mol% were polymd. at 90° for 2 h in the presence of ammonium persulfate and NaHSO<sub>3</sub> in water to give a 20.2%-solid aq. polymer showing viscosity 9800 cPs and no gelation, which was added to pulp slurry then processed to give a paper showing sp. bursting strength 2.55 (JIS P 8112).

IT **185142-29-4P**, Acrylamide-N,N-dimethylacrylamide-sodium methallylsulfonate copolymer **185142-32-9P**, Acrylamide-acrylic acid-N,N-dimethylacrylamide-sodium methallylsulfonate copolymer **185142-34-1P**, Acrylamide-N,N-dimethylacrylamide-dimethylaminoethyl methacrylate-sodium methallylsulfonate copolymer **185142-37-4P**, Acrylamide-acrylic acid-N,N-dimethylacrylamide-dimethylaminoethyl methacrylate-sodium methallylsulfonate copolymer **185142-39-6P** **185142-40-9P** **185142-41-0P** **185142-42-1P** **185142-43-2P** **185142-44-3P** **185142-45-4P** **185142-46-5P**

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);



PREP (Preparation); USES (Uses)

(highly branched (meth)acrylamide polymers as paper strength agents)

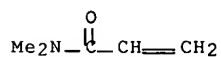
RN 185142-29-4 HCAPLUS

CN 2-Propene-1-sulfonic acid, 2-methyl-, sodium salt, polymer with N,N-dimethyl-2-propenamide and 2-propenamide (9CI) (CA INDEX NAME)

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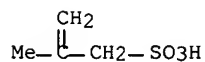
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CM 2

CRN 1561-92-8

CMF C4 H8 O3 S . Na

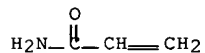


● Na

CM 3

CRN 79-06-1

CMF C3 H5 N O



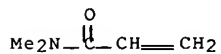
RN 185142-32-9 HCAPLUS

CN 2-Propenoic acid, polymer with N,N-dimethyl-2-propenamide, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

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CRN 2680-03-7

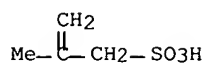
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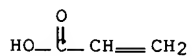
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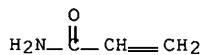
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CM 4

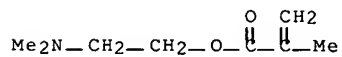
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CMF C3 H5 N O



RN 185142-34-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer  
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2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

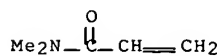
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CRN 2867-47-2  
CMF C8 H15 N O2



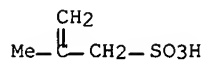
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CRN 2680-03-7  
CMF C5 H9 N O



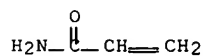
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CRN 1561-92-8  
CMF C4 H8 O3 S . Na



CM 4

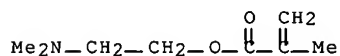
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CMF C3 H5 N O



RN 185142-37-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer  
with N,N-dimethyl-2-propenamide, 2-propenamide, 2-propenoic acid and  
sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

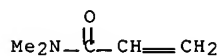
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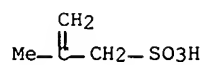
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CMF C5 H9 N O



CM 3

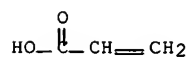
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● Na

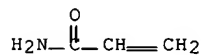
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CMF C3 H4 O2



CM 5

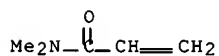
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CMF C3 H5 N O



RN 185142-39-6 HCAPLUS  
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N,N-dimethyl-2-propenamide, 2-propenamide and 2-propenenitrile (9CI)  
(CA INDEX NAME)

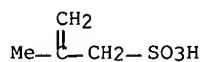
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CRN 2680-03-7  
CMF C5 H9 N O



CM 2

CRN 1561-92-8  
CMF C4 H8 O3 S . Na

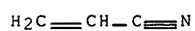


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CM 3

CRN 107-13-1

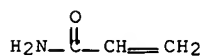
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CM 4

CRN 79-06-1

CMF C3 H5 N O



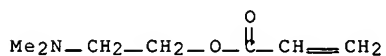
RN 185142-40-9 HCAPLUS

CN 2-Propenoic acid, polymer with 2-(dimethylamino)ethyl 2-propenoate,  
N-(1-methylethyl)-2-propenamide, 2-propenamide and sodium  
2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 2439-35-2

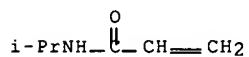
CMF C7 H13 N O2



CM 2

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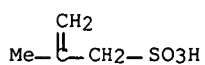
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CM 3

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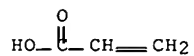
CMF C4 H8 O3 S . Na



● Na

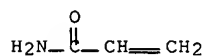
CM 4

CRN 79-10-7  
CMF C3 H4 O2



CM 5

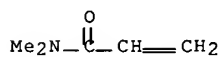
CRN 79-06-1  
CMF C3 H5 N O



RN 185142-41-0 HCAPLUS  
CN 2-Propenoic acid, polymer with 2-(dimethylamino)ethyl 2-propenoate,  
N,N-dimethyl-2-propenamide, 2-propenamide and sodium  
2-propene-1-sulfonate (9CI) (CA INDEX NAME)

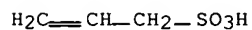
CM 1

CRN 2680-03-7  
CMF C5 H9 N O



CM 2

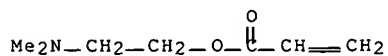
CRN 2495-39-8  
CMF C3 H6 O3 S . Na



● Na

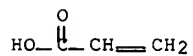
CM 3

CRN 2439-35-2  
CMF C7 H13 N O2



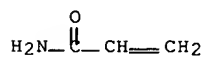
CM 4

CRN 79-10-7  
CMF C3 H4 O2



CM 5

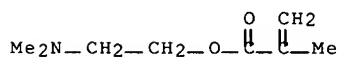
CRN 79-06-1  
CMF C3 H5 N O



RN 185142-42-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer  
with N-(1-methylethyl)-2-propenamide, 2-propenamide, 2-propenoic  
acid and sodium 2-propene-1-sulfonate (9CI) (CA INDEX NAME)

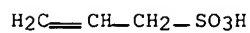
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CRN 2867-47-2  
CMF C8 H15 N O2



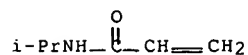
CM 2

CRN 2495-39-8  
CMF C3 H6 O3 S . Na



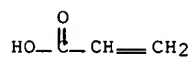
CM 3

CRN 2210-25-5  
CMF C6 H11 N O



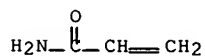
CM 4

CRN 79-10-7  
CMF C3 H4 O2



CM 5

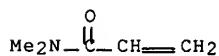
CRN 79-06-1  
CMF C3 H5 N O



RN 185142-43-2 HCAPLUS  
CN Butanedioic acid, methylene-, polymer with 2-(dimethylamino)ethyl  
2-propenoate, N,N-dimethyl-2-propenamide, 2-propenamide and sodium  
2-propene-1-sulfonate (9CI) (CA INDEX NAME)

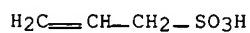
CM 1

CRN 2680-03-7  
CMF C5 H9 N O



CM 2

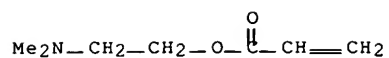
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CMF C3 H6 O3 S . Na



CM 3

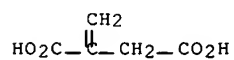
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CMF C7 H13 N O2





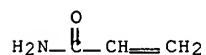
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CRN 97-65-4  
CMF C5 H6 O4



CM 5

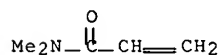
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RN 185142-44-3 HCAPLUS  
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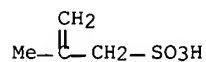
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CMF C5 H9 N O



CM 2

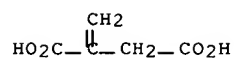
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CMF C4 H8 O3 S . Na



● Na

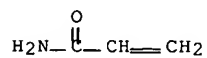
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CMF C5 H6 O4



CM 4

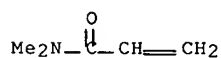
CRN 79-06-1  
CMF C3 H5 N O



RN 185142-45-4 HCAPLUS  
CN 2-Propenoic acid, polymer with N,N-dimethyl-2-propenamide,  
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sulfonate (9CI) (CA INDEX NAME)

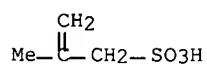
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CM 2

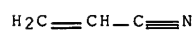
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● Na

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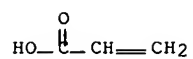
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CM 4

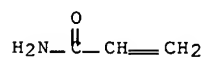
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CM 5

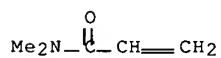
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CMF C3 H5 N O



RN 185142-46-5 HCAPLUS  
CN Butanedioic acid, methylene-, polymer with N,N-dimethyl-2-propenamide, 2-propenamide, 2-propenenitrile and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

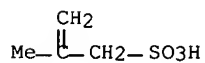
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CM 2

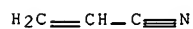
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CMF C4 H8 O3 S . Na



● Na

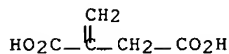
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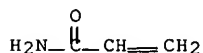
CM 4

CRN 97-65-4  
CMF C5 H6 O4



CM 5

CRN 79-06-1  
CMF C3 H5 N O



IC ICM D21H017-37  
ICS C08L033-26  
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 37  
IT **185142-29-4P**, Acrylamide-N,N-dimethylacrylamide-sodium  
methallylsulfonate copolymer **185142-32-9P**,  
Acrylamide-acrylic acid-N,N-dimethylacrylamide-sodium  
methallylsulfonate copolymer **185142-34-1P**,  
Acrylamide-N,N-dimethylacrylamide-dimethylaminoethyl  
methacrylate-sodium methallylsulfonate copolymer  
**185142-37-4P**, Acrylamide-acrylic acid-N,N-dimethylacrylamide-  
dimethylaminoethyl methacrylate-sodium methallylsulfonate copolymer  
**185142-39-6P 185142-40-9P 185142-41-0P**  
**185142-42-1P 185142-43-2P 185142-44-3P**  
**185142-45-4P 185142-46-5P**  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
**PREP (Preparation); USES (Uses)**  
(highly branched (meth)acrylamide polymers as paper  
strength agents)

L32 ANSWER 21 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1996:660762 HCAPLUS Full-text  
DOCUMENT NUMBER: 125:278207  
TITLE: Molded products made of poly(vinyl alcohol)  
(PVA) with excellent mechanical strength and  
processability  
INVENTOR(S): Myamoto, Yoshihiko  
PATENT ASSIGNEE(S): Nippon Synthetic Chem Ind, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08217830	A2	19960827	JP 1995-49126	19950213

PRIORITY APPLN. INFO.: JP 1995-49126  
19950213

<--

AB Molded products such as fibers, films, sheets, pipes, tubes, membranes, etc. comprise (A) PVA copolymd. with 0.1-20 mol% CH<sub>2</sub>:CR<sub>1</sub>CONR<sub>0</sub>2 [R<sub>0</sub> = (CH<sub>2</sub>)<sub>n</sub>CR<sub>2</sub>R<sub>3</sub>R<sub>4</sub>; n = 1-3; R<sub>1</sub> = H, Me; R<sub>2-4</sub> = H, alkyl, aryl, ≥2 of them are not H at the same time, total C of R<sub>2-4</sub> ≥4] and 0.1-20 mol% ethylenically unsatd. carboxylic acids or their salts and optionally (B) ≥1 hydrophobic resin selected from polyamides, polyolefins, polyesters, and vinyl chloride resins. Thus, 100 parts vinyl acetate (I) was polymd. with 8.0 parts monomethyl maleate and 22.6 parts N,N-diisobutylacrylamide to 50% conversion at 62° for 5 h in the presence of AIBN, neutralized with NaOH, sapond. (90 mol%) with 30 mmol (vs. I unit) NaOH, and dried to obtain a polymer. Then, 20 parts of which was blended with 100 parts PVC and molded into a film showing tensile strength 450 kg/cm<sup>2</sup> and elongation 13%.

IT 170153-66-9DP, partially sapond.

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP** (Preparation); **USES** (Uses)

(manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and **branched** alkylacrylamides for molded products with good mech. strength)

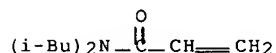
RN 170153-66-9 HCAPLUS

CN 2-Butenedioic acid (2Z)-, monomethyl ester, polymer with N,N-bis(2-methylpropyl)-2-propenamide and ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 64167-98-2

CMF C11 H21 N O

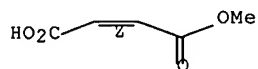


CM 2

CRN 3052-50-4

CMF C5 H6 O4

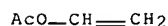
Double bond geometry as shown.



CM 3

CRN 108-05-4

CMF C4 H6 O2



IT 170153-67-0DP, partially sapond. 170153-69-2DP, partially sapond. 170153-70-5DP, partially sapond.

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP** (Preparation); **USES** (Uses)

(manuf. of poly(vinyl alc.) modified with ethylenically unsatd.  
 carboxylic acids and **branched** alkylacrylamides for  
 molded products with good mech. strength)

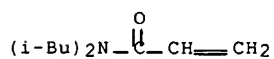
RN 170153-67-0 HCAPLUS

CN Butanedioic acid, methylene-, polymer with N,N-bis(2-methylpropyl)-2-propenamide and ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 64167-98-2

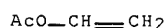
CMF C11 H21 N O



CM 2

CRN 108-05-4

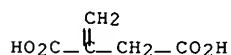
CMF C4 H6 O2



CM 3

CRN 97-65-4

CMF C5 H6 O4



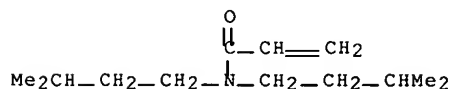
RN 170153-69-2 HCAPLUS

CN 2-Butenedioic acid (2Z)-, monomethyl ester, polymer with  
 N,N-bis(3-methylbutyl)-2-propenamide and ethenyl acetate (9CI) (CA  
 INDEX NAME)

CM 1

CRN 170153-68-1

CMF C13 H25 N O

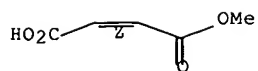


CM 2

CRN 3052-50-4

CMF C5 H6 O4

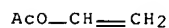
Double bond geometry as shown.



CM 3

CRN 108-05-4

CMF C4 H6 O2



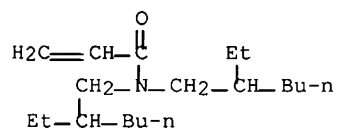
RN 170153-70-5 HCAPLUS

CN 2-Butenedioic acid (2Z)-, monomethyl ester, polymer with  
N,N-bis(2-ethylhexyl)-2-propenamide and ethenyl acetate (9CI) (CA  
INDEX NAME)

CM 1

CRN 78733-21-8

CMF C19 H37 N O

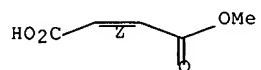


CM 2

CRN 3052-50-4

CMF C5 H6 O4

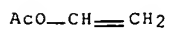
Double bond geometry as shown.



CM 3

CRN 108-05-4

CMF C4 H6 O2



IC ICM C08F216-06

ICS C08F220-04; C08F222-02; C08L029-04

ICA C08L023-00; C08L027-06; C08L067-00; C08L077-00

CC 38-3 (Plastics Fabrication and Uses)

IT Polyamides, uses  
Polyesters, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **USES (Uses)**  
(blends; manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

IT Plastics, molded  
RL: PRP (Properties); TEM (Technical or engineered material use); **USES (Uses)**  
(blends; manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

IT Alkenes, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **USES (Uses)**  
(polymers, blends; manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

IT 9002-86-2, PVC 24937-16-4, Nylon 12 25038-74-8, Azacyclotridecan-2-one homopolymer  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **USES (Uses)**  
(blends; manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

IT 170153-66-9DP, partially saponified.  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation); USES (Uses)**  
(manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

IT 170153-67-0DP, partially saponified. 170153-69-2DP, partially saponified. 170153-70-5DP, partially saponified.  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation); USES (Uses)**  
(manuf. of poly(vinyl alc.) modified with ethylenically unsatd. carboxylic acids and branched alkylacrylamides for molded products with good mech. strength)

L32 ANSWER 22 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:425622 HCAPLUS Full-text

DOCUMENT NUMBER: 125:123702

TITLE: Dense star polymer conjugates

INVENTOR(S): Tomalia, Donald A.; Wilson, Larry R.; Hedstrand, David M.; Tomlinson, Ian A.; Fazio, Michael J.; Kruper, William J. Jr.; Kaplan, Donald A.; Cheng, Roberta C.; Edwards, David S.; Jung, Chu W.

PATENT ASSIGNEE(S): The Dow Chemical Company, USA

SOURCE: U.S., 49 pp., Cont.-in-part of U.S. 5,338,532.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5527524	A	19960618	US 1993-43198	19930405



BR 8707431	A	19881101	BR 1987-7431	198704 19
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AT 89743	E	19930615	AT 1987-307266	198708 17
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JP 63501878	T2	19880728	JP 1987-505282	198708 18
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JP 63502350	T2	19880908	JP 1987-505084	198708 18
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FI 8801768	A	19880415	FI 1988-1768	198804 15
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FI 103410	B1	19990630		
US 5338532	A	19940816	US 1991-654851	199102 13
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WO 9524221	A1	19950914	WO 1995-US3045	199503 07
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W: AU, BR, CA, CN, CZ, EE, FI, GE, HU, JP, KR, LT, LV, MX, NO,				
NZ, PL, PT, RU, SI, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE				
US 5714166	A	19980203	US 1995-400203	199503 07
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FI 105693	B1	20000929		
AU 2002029312	A5	20020523	AU 2002-29312	200203 28
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AU 768662	B2	20031218		
PRIORITY APPLN. INFO.:			US 1986-897455	B2 198608 18
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			US 1991-654851	A2 199102

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 EP 1987-307266 A 13  
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 WO 1987-US2075 W  
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 US 1993-43198 A2  
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 199403  
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 US 1994-316536 A2  
 199409  
 30  
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 AU 1999-64440 A3  
 199912  
 10

AB Dense star polymer conjugates which are composed of at least one dendrimer in assocn. with at least one unit of a carried agricultural, pharmaceutical, or other material have been prepd. These conjugates have particularly advantageous properties due to the unique characteristics of the dendrimer. Incorporation of aspirin into Starburst dendrimers was presented as an example.

IT 179550-60-8P 179550-61-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); **USES (Uses)**  
 (dense **star** polymers as carriers for delivery of biol. active agents)

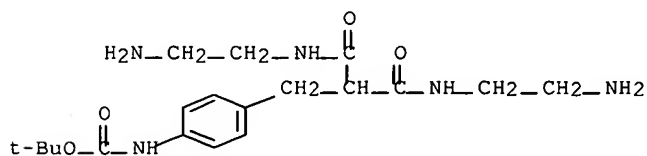
RN 179550-60-8 HCAPLUS

CN 2-Propenoic acid, methyl ester, polymer with 1,1-dimethylethyl  
 [4-[3-[(2-aminoethyl)amino]-2-[[ (2-aminoethyl)amino]carbonyl]-3-oxopropyl]phenyl]carbamate (9CI) (CA INDEX NAME)

CM 1

CRN 119822-35-4

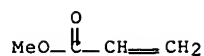
CMF C19 H31 N5 O4



CM 2

CRN 96-33-3

CMF C4 H6 O2



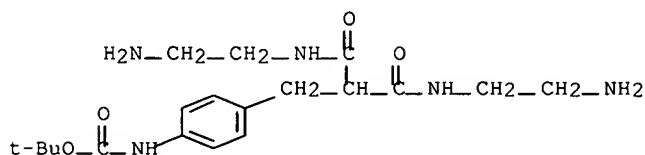
RN 179550-61-9 HCAPLUS

CN 2-Propenoic acid, methyl ester, polymer with 1,1-dimethylethyl  
[4-[3-[(2-aminoethyl)amino]-2-[[[(2-aminoethyl)amino]carbonyl]-3-oxopropyl]phenyl]carbamate and 1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 119822-35-4

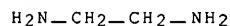
CMF C19 H31 N5 O4



CM 2

CRN 107-15-3

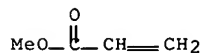
CMF C2 H8 N2



CM 3

CRN 96-33-3

CMF C4 H6 O2



IC ICM A61K031-74

ICS A61K009-14; A61K031-785

INCL 424001330

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 5, 8, 38

IT Odor and Odorous substances

RL: BUU (Biological use, unclassified); BIOL (Biological study);

**USES (Uses)**

(dense star polymers as carriers for delivery of biol. active agents)

IT Dendritic polymers

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL

(Biological study); PREP (Preparation); **USES (Uses)**

(dense star polymers as carriers for delivery of biol. active agents)

agents)

IT Radioelements, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); **USES**  
**(Uses)**  
 (dense star polymers as carriers for delivery of biol. active agents)

IT Immunoglobulins  
 RL: THU (Therapeutic use); BIOL (Biological study); **USES**  
**(Uses)**  
 (G, dense star polymers as carriers for delivery of biol. active agents)

IT Polymers, biological studies  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **USES (Uses)**  
 (conjugates, dendrimers; dense star polymers as carriers for delivery of biol. active agents)

IT Polyamines  
 RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **USES (Uses)**  
 (polyamide-, dense star polymers as carriers for delivery of biol. active agents)

IT Polyamides, biological studies  
 RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **USES (Uses)**  
 (polyamine-, dense star polymers as carriers for delivery of biol. active agents)

IT Polyamines  
 RL: AGR (Agricultural use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **USES (Uses)**  
 (polyethylene-, dense star polymers as carriers for delivery of biol. active agents)

IT 79-08-3DP, Bromoacetic acid, reaction product with dendritic polymers 26937-01-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); **USES (Uses)**  
 (dendrimer; dense star polymers as carriers for delivery of biol. active agents)

IT 94-75-7, 2,4-D, biological studies  
 RL: AGR (Agricultural use); BIOL (Biological study); **USES**  
**(Uses)**  
 (dense star polymers as carriers for delivery of biol. active agents)

IT 107-16-4DP, Glyconitrile, reaction product with dendritic polymers, hydrogenated 350-46-9DP, 4-Fluoronitrobenzene, reaction product with dendritic polymers 171409-41-9DP, hydrolyzed 171409-41-9P 179550-60-8P 179550-61-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); **USES (Uses)**  
 (dense star polymers as carriers for delivery of biol. active agents)

IT 67-43-6DP, DTPA, conjugates with polyamidoamine dendrimer 96-33-3DP, Methyl acrylate, reaction products with polyamidoamine 107-15-3DP, 1,2-Ethanediamine, reaction products with polyamidoamine 118-48-9DP, Isatoic anhydride, conjugates with polyamidoamine dendrimer 463-71-8DP, Thiophosgene, reaction product with dendritic polymers 605-65-2DP, Dansyl chloride, reaction products with star polyethyleneimine 2984-50-1DP, reaction products with polyamidoamine 7390-81-0DP, reaction products with polyamidoamine 7665-72-7DP, tert-Butyl glycidyl ether, reaction products with polyamidoamine 9003-99-0DP, Peroxidase, conjugates with star polyamidoamine and IgG 12064-62-9DP, Gadolinium oxide (Gd<sub>2</sub>O<sub>3</sub>), conjugates with DTPA and dendrimer 16056-77-2DP, Gadolinium

acetate, conjugates with star polyamidoamine 21293-29-8DP, Absciscic acid, reaction products with polyamidoamine dendrimer 23911-26-4DP, DTPA anhydride, conjugates with polyamidoamine dendrimer 30953-20-9DP, Bradykinin potentiator C, conjugates with star polyamidoamine 51306-35-5DP, reaction products with polyamidoamine dendrimer 51908-46-4DP, N-Dansyl aziridine, reaction products with star polyethyleneimine 66556-73-8DP, conjugates with star polyamidoamine 106754-95-4DP, 4'-Aminomethyl fluorescein, reaction products with polyamidoamine dendrimer 171409-42-0DP, reaction products with star polyamidoamine 179550-59-5P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **USES (Uses)**

(dense star polymers as carriers for delivery of biol. active agents)

IT 50-78-2, Aspirin 69-72-7, biological studies 90-82-4, Pseudoephedrine 301-04-2, Lead diacetate 518-47-8, Disodium fluorescein 5989-27-5, (+)-Limonene 7439-89-6, Iron, biological studies 7439-89-6D, Iron, complexes with star polymers 7439-96-5, Manganese, biological studies 7440-02-0, Nickel, biological studies 7440-05-3, Palladium, biological studies 7440-16-6, Rhodium, biological studies 7440-42-8, Boron, biological studies 7440-54-2, Gadolinium, biological studies 7440-54-2D, Gadolinium, complexes with star polyamidoamine or polyethyleneimine 7440-65-5, Yttrium, biological studies 7647-10-1, Palladium chloride 7705-08-0, Ferric chloride, biological studies 7718-54-9, Nickel chloride (NiCl<sub>2</sub>), biological studies 7773-01-5, Manganese chloride (MnCl<sub>2</sub>) 10049-07-7, Rhodium trichloride 10138-52-0, Gadolinium chloride (GdCl<sub>3</sub>) 10168-81-7, Gadolinium nitrate (Gd(NO<sub>3</sub>)<sub>3</sub>) 10361-92-9, Yttrium chloride 12261-51-7 15213-88-4 15651-72-6 20694-16-0 23363-14-6, Yttrium acetate 27072-45-3, Fluorescein isothiocyanate 50800-85-6, Indium-111 chloride 52542-78-6 76823-03-5, 5-Carboxyfluorescein 83678-67-5, Gadolinium DOTA 114873-37-9

RL: THU (Therapeutic use); BIOL (Biological study); **USES**

**(Uses)**

(dense star polymers as carriers for delivery of biol. active agents)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-66-3, Chloroform, uses 67-68-5, Dimethyl sulfoxide, uses 68-12-2, Dimethylformamide, uses 71-43-2, Benzene, uses 75-05-8, Acetonitrile, uses 108-67-8, Mesitylene, uses 108-88-3, Toluene, uses 872-50-4, uses 1330-20-7, Xylene, uses 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); **USES (Uses)**

(solvent; dense star polymers as carriers for delivery of biol. active agents)

L32 ANSWER 23 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:797236 HCAPLUS Full-text

DOCUMENT NUMBER: 123:199706

TITLE: Graft copolymers from hydrophilic macromonomers and aqueous pigment dispersions based thereon

INVENTOR(S): Chu, I-Cheng; Fryd, Michael; Lynch, Laurie E.

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9421701	A1	19940929	WO 1993-US2701	199303

22

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W: BR, CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE

CA 2157361 AA 19940929 CA 1993-2157361

199303  
22

&lt;--

CA 2157361 C 20051025  
BR 9307765 A 19951024 BR 1993-7765199303  
22

&lt;--

EP 690883 A1 19960110 EP 1993-908521

199303  
22

&lt;--

EP 690883 B1 19961002  
R: DE, ES, FR, GB  
ES 2092821 T3 19961201 ES 1993-908521199303  
22

&lt;--

JP 10502097 T2 19980224 JP 1994-520978

199303  
22

&lt;--

JP 3438893 B2 20030818  
PRIORITY APPLN. INFO.: EP 1993-908521 A199303  
22

&lt;--

WO 1993-US2701 A

199303  
22

&lt;--

AB A pigment dispersion for coating compns. contains dispersed pigment, an aq. carrier, and a graft copolymer dispersant; the graft copolymer has wt.-av. mol. wt. 5,000-100,000 and consists of a polymeric backbone and macromonomer side chains, wherein (1) the backbone is hydrophobic in comparison to the side chains and contains  $\leq 20\%$  polymd. ethylenically unsatd. acid monomers, (2) the side chains are hydrophilic macromonomers attached to the backbone at a single terminal point and contain polymd. ethylenically unsatd. monomers and 2-100% by wt., based on the wt. of the macromonomer, of polymd. ethylenically unsatd. acid monomers and have wt.-av. mol. wt. 1,000-30,000, and (3) the acid groups of the graft copolymer are neutralized with an inorg. base or an amine. These graft copolymers provide stable pigment dispersions and are compatible with the acrylic binders of waterborne automotive finishes in which the pigments are incorporated.

IT 153163-38-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(graft copolymers with hydrophobic backbone and hydrophilic branches as dispersants in aq. pigment dispersions)

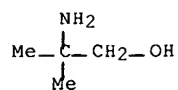
RN 153163-38-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, methyl 2-methyl-2-propenoate, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and methyl 2-propenoate, graft, compd. with 2-amino-2-methyl-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-68-5

CMF C4 H11 N O



CM 2

CRN 153163-37-2

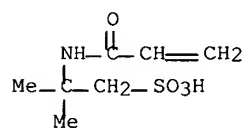
CMF (C7 H13 N O4 S . C7 H12 O2 . C5 H8 O2 . C4 H6 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 15214-89-8

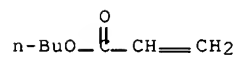
CMF C7 H13 N O4 S



CM 4

CRN 141-32-2

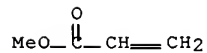
CMF C7 H12 O2



CM 5

CRN 96-33-3

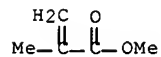
CMF C4 H6 O2



CM 6

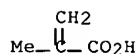
CRN 80-62-6

CMF C5 H8 O2



CM 7

CRN 79-41-4  
CMF C4 H6 O2

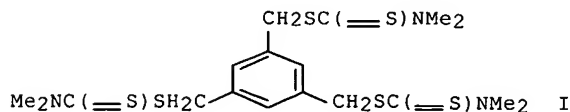


IC ICM C08F299-00  
ICS C09D017-00  
CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 42  
IT 153163-33-8P 153163-36-1P 153163-38-3P 153163-39-4P  
153163-41-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(graft copolymers with hydrophobic backbone and hydrophilic branches as dispersants in aq. pigment dispersions)

L32 ANSWER 24 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1995:604245 HCAPLUS Full-text  
DOCUMENT NUMBER: 123:156346  
TITLE: Electrostatographic liquid developers useful for electrophotographic platemaking process  
INVENTOR(S): Kato, Eiichi  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 07043955	A2	19950214	JP 1993-209979	19930803
			<--	
PRIORITY APPLN. INFO.:			JP 1993-209979	19930803
			<--	

GI



AB The developers contain resin particles dispersed in a nonaq. solvent; the resin particles are prepd. by polymg. a mixt. contg. (1) sol. monofunctional monomers (A), which become insol. on polymn., (2) polyfunctional monomers, and (3) dispersion-stabilizing resins of star-shaped copolymers (wt. av. mol. wt. 2 + 104-1 + 106). Block A contains polymer components having polar groups selected from phosphono, carboxyl, sulfo, hydroxyl, amino, P(:O)(OH)R<sub>1</sub> (R<sub>1</sub> = R<sub>2</sub> or OR<sub>2</sub>; R<sub>2</sub> = hydrocarbon), CONR<sub>3</sub>R<sub>4</sub>, (R<sub>3</sub>, R<sub>4</sub> = H or hydrocarbon), etc., and cyclic acid anhydride groups, and/or polymer components corresponding to the monomers A; block B contains polymer components CHR<sub>5</sub>CR<sub>6</sub>(X<sub>1</sub>Y<sub>1</sub>) [X<sub>1</sub> = CO<sub>2</sub>, OCO, (CH<sub>2</sub>)<sub>x</sub>CO<sub>2</sub>, etc.; Y<sub>1</sub> = C<sub>≥8</sub> aliph. group; R<sub>5</sub>, R<sub>6</sub> = H, halo,



cyano, hydrocarbon, CO2Z1]. The developers show good dispersibility, and are useful for electrophotog. platemaking; the plates exhibit good printing durability. Thus, Me methacrylate and Me acrylate were photopolymd. in the presence of I, and the resulting polymer was reacted with stearyl methacrylate to give a dispersant. A mixt. of the polymer dispersant, vinyl acetate, and divinyl adipate was polymd. in Isopar H as solvent to give a particle dispersion, and the dispersion and additives were dispersed in Isopar G to give a liq. developer.

IT 159967-55-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(star-block; electrophotog. liq. developer contg. dispersed resin particles)

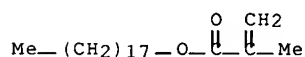
RN 159967-55-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with N,N-dimethyl-2-propenamide and octadecyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

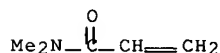
CMF C22 H42 O2



CM 2

CRN 2680-03-7

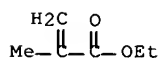
CMF C5 H9 N O



CM 3

CRN 97-63-2

CMF C6 H10 O2



IC ICM G03G009-13

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

IT 150551-92-1 150551-97-6 159967-38-1 159967-40-5 159967-41-6  
159967-43-8 167021-60-5

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(chain initiator; electrophotog. liq. developer contg. dispersed resin particles)

IT 61509-38-4, Divinylbenzene-vinyl acetate copolymer 167021-64-9, Divinyl glucarate-vinyl acetate copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(electrophotog. liq. developer contg. dispersed resin particles)

IT 25951-78-4P, Divinyl adipate-vinyl acetate copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); **USES (Uses)**  
 (electrophotog. liq. developer for lithog. platemaking)

IT 9082-26-2 27015-60-7, Ethylene glycol dimethacrylate-vinyl acetate copolymer 58698-55-8, Ethylene glycol diacrylate-methyl acrylate-methyl methacrylate copolymer 73784-91-5 122083-53-8 126969-53-7 150344-27-7, Allyl methacrylate-vinyl acetate copolymer 150344-28-8, Vinyl acetate-vinyl methacrylate copolymer 150344-29-9, Allyl crotonate-vinyl acetate copolymer 150344-30-2, Trivinylbenzene-vinyl acetate copolymer 150997-12-9 150997-14-1 167021-65-0 167021-66-1 167021-67-2 167021-68-3  
 RL: TEM (Technical or engineered material use); **USES (Uses)**  
 (electrophotog. liq. developer for lithog. platemaking)

IT 150469-59-3P 159967-35-8P 159967-36-9P, Methyl acrylate-methyl methacrylate-octadecyl methacrylate block copolymer 159967-45-0P 159967-46-1P 159967-47-2P 159967-48-3P 159967-49-4P 159967-50-7P 159967-51-8P 159967-52-9P 159967-54-1P 159967-55-2P 167021-62-7P  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); **USES (Uses)**  
 (star-block; electrophotog. liq. developer contg. dispersed resin particles)

L32 ANSWER 25 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:599541 HCAPLUS Full-text  
 DOCUMENT NUMBER: 123:22107  
 TITLE: Electrophotographic photoreceptor suited for semiconductor laser scanning  
 INVENTOR(S): Kato, Eiichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 54 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 07005716	A2	19950110	JP 1993-167330	19930615

<--

PRIORITY APPLN. INFO.: JP 1993-167330

19930615

<--

AB In the title electrophotog. photoreceptor comprising a photoconductor layer contg. an inorg. photoconductor, a spectral sensitizing dye, and a binder resin, the binder resin is made up of ≥1 resin having a repeating unit of [CH<sub>2</sub>-C(Me)(COOR<sub>10</sub>)] (R<sub>10</sub> = hydrocarbon group). This electrophotog. photoreceptor exhibited excellent color reproducibility and humidity resistance.

IT 152222-98-5P 163655-81-0P 163749-83-5P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
**PREP (Preparation); USES (Uses)**  
 (star copolymer; electrophotog. photoreceptor suited for semiconductor laser scanning)

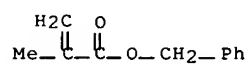
RN 152222-98-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with N-methyl-2-propenamide, phenylmethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 2495-37-6

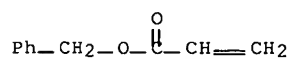
CMF C11 H12 O2



CM 2

CRN 2495-35-4

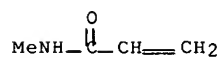
CMF C10 H10 O2



CM 3

CRN 1187-59-3

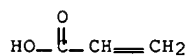
CMF C4 H7 N O



CM 4

CRN 79-10-7

CMF C3 H4 O2



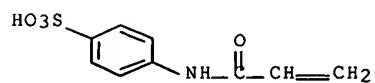
RN 163655-81-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
1-ethenyl-4-methylbenzene, methyl 2-propenoate and  
4-[(1-oxo-2-propenyl)amino]benzenesulfonic acid (9CI) (CA INDEX  
NAME)

CM 1

CRN 30069-13-7

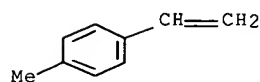
CMF C9 H9 N O4 S



CM 2

CRN 622-97-9

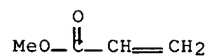
CMF C9 H10



CM 3

CRN 96-33-3

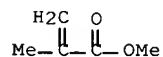
CMF C4 H6 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



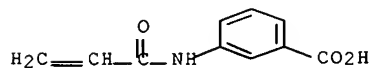
RN 163749-83-5 HCAPLUS

CN Benzoic acid, 3-[(1-oxo-2-propenyl)amino]-, polymer with ethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and methyl 2-propenoate, alternating (9CI) (CA INDEX NAME)

CM 1

CRN 17090-28-7

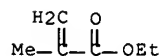
CMF C10 H9 N O3



CM 2

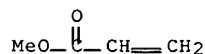
CRN 97-63-2

CMF C6 H10 O2



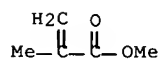
CM 3

CRN 96-33-3  
CMF C4 H6 O2



CM 4

CRN 80-62-6  
CMF C5 H8 O2



IC ICM G03G005-08  
ICS G03G013-28

ICA G03G005-05

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 25085-83-0DP, Benzyl methacrylate homopolymer, carboxy-terminated  
25133-97-5P, Ethyl acrylate-methacrylic acid-methyl methacrylate  
copolymer 28603-63-6DP, carboxy- and phosphate-terminated  
31942-54-8DP, carboxy-terminated 36582-66-8DP, Methyl  
acrylate-methyl methacrylate-vinyl pyrrolidone copolymer,  
carboxy-terminated 65697-21-4DP, carboxy-terminated  
92488-52-3DP, carboxy- and sulfo-terminated 92488-52-3DP,  
carboxy-terminated 127909-19-7DP, phosphate-terminated  
127939-38-2DP, sulfo-terminated 139990-02-6DP, carboxy-terminated  
152792-35-3DP, carboxy-terminated 155246-81-4DP, sulfo- and  
carboxy anhydride-terminated 155838-58-7DP, carboxy-terminated  
163655-83-2DP, carboxy-terminated 163655-86-5DP, carboxy- and  
sulfo-terminated 163655-87-6DP, carboxy-terminated  
163655-97-8DP, carboxy-terminated 163655-98-9DP,  
carboxy-terminated 163655-99-0DP, carboxy-terminated  
163656-00-6DP, carboxy-terminated 163656-01-7DP,  
carboxy-terminated 163656-05-1P 163656-06-2DP, carboxy- and  
sulfo-terminated 163656-07-3DP, sulfo-terminated 163749-79-9DP,  
carboxy-terminated 163749-80-2DP, carboxy-terminated  
163749-81-3DP, carboxy-terminated 163749-82-4DP,  
carboxy-terminated 163749-85-7DP, carboxy-terminated  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP  
(Preparation); **USES (Uses)**

(electrophotog. photoreceptor suited for semiconductor laser  
scanning)

IT 152792-55-7 158034-40-3

RL: CAT (Catalyst use); **USES (Uses)**

(star copolymer initiator; electrophotog. photoreceptor suited  
for semiconductor laser scanning)

IT 27155-22-2DP, hydrolyzed 144407-88-5P 149341-87-7P, Acrylic  
acid-methyl acrylate-methyl methacrylate block copolymer  
152222-96-3P 152222-98-5P 152222-99-6P 155161-49-2P  
155161-63-0P 163655-81-0P 163655-82-1P 163655-83-2P  
163655-85-4P 163656-04-0P 163749-83-5P 163749-84-6P

RL: IMF (Industrial manufacture); POF (Polymer in formulation);

**PREP (Preparation); USES (Uses)**

(star copolymer; electrophotog. photoreceptor suited  
for semiconductor laser scanning)

IT 76046-54-3 150551-83-0 150551-91-0 150551-92-1 158034-36-7  
158034-37-8 158034-38-9 158034-39-0 163655-88-7 163655-89-8  
163655-90-1 163655-91-2 163655-92-3 163655-93-4 163655-94-5  
163655-95-6 163655-96-7

**RL: CAT (Catalyst use); USES (Uses)**

(star copolymn. initiator; electrophotog. photoreceptor suited  
for semiconductor laser scanning)

L32 ANSWER 26 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:297683 HCAPLUS Full-text

DOCUMENT NUMBER: 122:57877

TITLE: Water-soluble highly branched  
high-molecular-weight polymeric microparticles

INVENTOR(S): Neff, Roger E.; Ryles, Roderick G.

PATENT ASSIGNEE(S): Cytec Technology Corp., USA

SOURCE: U.S., 7 pp. Cont. U.S. Ser. No. 552,958,  
abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 5354481	A	19941011	US 1993-65793	199305 13
			<--	
US 6130303	A	20001010	US 1994-180933	199401 11
			<--	
PRIORITY APPLN. INFO.:			US 1988-285931	B3 198812 19
			<--	
			US 1990-552958	B1 199007 16
			<--	
			US 1991-643309	B1 199101 22
			<--	

AB A method of releasing water from a dispersion of suspended solids comprises (a) adding to the dispersion .apprx.0.1-50,000 ppm, per million parts of dispersion solids, of an aq. soln. of the title polymers derived from an inverse microemulsion contg. aq. droplets of the polymers, wherein the droplets have av. diam.  $\leq 0.1 \mu$  and the polymers have soln. viscosity  $\geq 1.8$  mPa-s, soly. quotient  $\geq 30\%$ , and branching agent content  $\geq 4$  M ppm; (b) dewatering the mixt. of the dispersion of suspended solids and the flocculant. The microparticles give excellent results in a no. of solid-liq. sepn. processes, particularly in flocculation of various dispersions of suspended solids, such as sewage sludge, and in the thickening of cellulosic paper pulp suspension.

IT 25034-58-6P, Acrylamide-N,N-methylene bisacrylamide  
copolymer 25085-02-3P, Acrylamide-sodium acrylate  
copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); **PREP (Preparation); USES (Uses)**

(water-sol. highly branched polymeric microparticles)

RN 25034-58-6 HCAPLUS

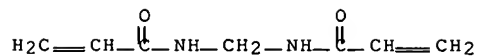
CN 2-Propenamide, N,N'-methylenebis-, polymer with 2-propenamide (9CI)

(CA INDEX NAME)

CM 1

CRN 110-26-9

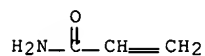
CMF C7 H10 N2 O2



CM 2

CRN 79-06-1

CMF C3 H5 N O



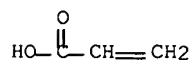
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

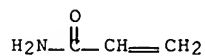


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



IC ICM C02F001-56

INCL 210734000

CC 38-3 (**Plastics** Fabrication and Uses)

Section cross-reference(s): **35**, **60**

IT **25034-58-6P**, Acrylamide-N,N-methylene bisacrylamide copolymer **25085-02-3P**, Acrylamide-sodium acrylate copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)**

(water-sol. highly **branched** polymeric microparticles)

L32 ANSWER 27 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1995:121372 HCAPLUS Full-text  
 DOCUMENT NUMBER: 122:106843  
 TITLE: Star-branched polymers and their manufacture  
 INVENTOR(S): Matsuda, Tatsuto; Fukuhara, Hiroji  
 PATENT ASSIGNEE(S): Nippon Catalytic Chem Ind, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 06199952	A2	19940719	JP 1992-349026	199212 28

PRIORITY APPLN. INFO.: <--  
 JP 1992-349026  
 199212  
 28

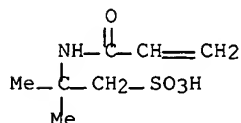
AB Title polymers contain a thiol with  $\geq 3$  functionality as core and branches with no.-av. mol. wt (Mn) 1000-100,000 linked by sulfide linkage to the core and have polydispersity  $\leq 5$ . They are manufd. by polymg. vinyl monomers as branching component and a polythiol as initiator in the presence of a metal salt and/or a metal complex as polymn. accelerator with ionization potential gap  $\geq 17$  eV between oxidn. states of the metal for stable existence, typically a V salt and/or a V complex and the branches may contain  $\geq 1$  functional group selected from OH, CO<sub>2</sub>H, epoxy, amino, sulfonate, silyl, and allyl. Thus, polymg. 40 parts Me methacrylate and 1.90 parts trimethylolpropane trithioglycolate in toluene in the presence of V (III) acetylacetonate at 80° gave a star-branched polymer with Mn 11,000 and Mw/Mn = 1.8 contg. 3 branches.

IT 160769-49-3P  
 RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
 (polymn. accelerator in manuf. of **star-branched**  
 polymers with polythiol core and vinyl polymer side chains)

RN 160769-49-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2,2-bis[(mercaptoacetyl)oxy]methyl]-1,3-propanediyl  
 bis(mercaptoacetate) and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-  
 propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

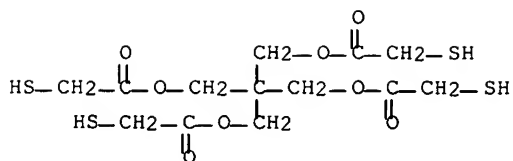
CRN 15214-89-8  
 CMF C7 H13 N O4 S



CM 2

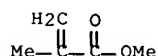
CRN 10193-99-4  
 CMF C13 H20 O8 S4





CM 3

CRN 80-62-6  
CMF C5 H8 O2



IC ICM C08F020-06  
ICS C08F004-00  
CC 35-7 (Chemistry of Synthetic High **Polymers**)  
IT 13476-99-8, Vanadium (III) acetylacetonate  
RL: CAT (Catalyst use); **USES (Uses)**  
(polymn. accelerator in manuf. of star-branched polymers with  
polythiol core and vinyl polymer side chains)  
IT 160769-43-7P 160769-44-8P 160769-45-9P 160769-46-0P  
160769-47-1P 160769-48-2P **160769-49-3P** 160769-50-6P  
160769-51-7P  
RL: IMF (Industrial manufacture); PRP (Properties); **PREP**  
**(Preparation)**  
(polymn. accelerator in manuf. of **star-branched**  
polymers with polythiol core and vinyl polymer side chains)

L32 ANSWER 28 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1994:641719 HCAPLUS Full-text  
DOCUMENT NUMBER: 121:241719  
TITLE: Electrophotographic photoreceptors suitable for  
low-power laser scanning exposure  
INVENTOR(S): Kato, Eiichi; Ishii, Kazuo  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 6  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06051541	A2	19940225	JP 1992-224563	19920803
US 5580690	A	19961203	US 1994-357150	19941215
PRIORITY APPLN. INFO.: JP 1991-221294 A 19910807				

<--  
JP 1991-260531 A  
199109  
12  
<--  
JP 1991-291865 A  
199110  
14  
<--  
JP 1991-334539 A  
199111  
25  
<--  
JP 1992-220928 A  
199207  
29  
<--  
JP 1992-224563 A  
199208  
03  
<--  
US 1993-39138 B2  
199304  
07  
<--  
US 1993-70540 B1  
199306  
02  
<--

AB The title electrophotog. photoreceptors comprise a binder resin which are made up of:  
(1) low mol.-wt. graft block copolymer having an A-B block copolymer in graft regions,  
wherein the A block contains a polar group in a polymer component and the B block  
contains a repeating unit, [a1HCCa2(V1R3)] [a1,2 = H, halo, cyano, hydrocarbon; V1 =  
divalent moiety; R3 = hydrocarbon]; and (2) high mol.-wt. star copolymer, wherein  
polymer chains are bonded with ≥3 sites of an org. mol., have a repeating unit,  
[b1HCCb2(COOR4)] [R4 = hydrocarbon; b1,2 = H, halo, cyano, hydrocarbon], and are  
terminated with a polar group.

IT 152792-49-9P

RL: DEV (Device component use); SPN (Synthetic preparation); TEM  
(Technical or engineered material use); **PREP (Preparation)**  
; **USES (Uses)**

(star-branched; electrophotog. photoreceptor  
binder resin)

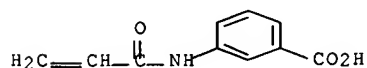
RN 152792-49-9 HCAPLUS

CN Benzoic acid, 3-[(1-oxo-2-propenyl)amino]-, polymer with ethyl  
2-propenoate, methyl 2-methyl-2-propenoate and methyl 2-propenoate,  
block (9CI) (CA INDEX NAME)

CM 1

CRN 17090-28-7

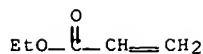
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CM 2

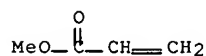
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CMF C5 H8 O2



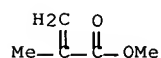
CM 3

CRN 96-33-3  
CMF C4 H6 O2



CM 4

CRN 80-62-6  
CMF C5 H8 O2



IC ICM G03G005-05

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38

IT 134334-22-8DP, Styrene-triphenylmethyl methacrylate block copolymer,  
methylstyrene-terminated, hydrolyzed 138115-34-1DP, Ethyl  
methacrylate-triphenylmethyl methacrylate block copolymer,  
hydrolyzed, carboxy-terminated 138115-42-1P 138115-52-3P  
138115-53-4P 138115-55-6P 138115-56-7P 138115-57-8P  
138115-58-9P 138115-59-0P 138115-60-3P 138115-61-4P  
138115-62-5P 138115-63-6P 138115-64-7P 138136-28-4DP,  
2-Chloro-6-methylphenyl methacrylate-4-vinylphenyloxytrimethylsilane  
block copolymer, hydrolyzed, terminated with Et methacrylate  
138136-29-5P 138232-67-4DP, Benzyl methacrylatebutyl methacrylate  
block copolymer, methylstyrene-terminated 138232-68-5DP, Acrylic  
acidphenyl methacrylate block copolymer, hydroxy-terminated, ester  
with 2-isocyanatoethyl methacrylate 138232-72-1P 142847-56-1P  
154402-89-8DP, hydrolyzed 154402-90-1DP, hydrolyzed  
154402-91-2DP, hydrolyzed 154402-92-3DP, hydrolyzed  
154402-93-4DP, hydrolyzed 154402-94-5DP, hydrolyzed  
154402-95-6DP, hydrolyzed 154402-96-7DP, hydrolyzed  
154402-97-8DP, hydrolyzed 154402-98-9DP, hydrolyzed  
154402-99-0DP, hydrolyzed 154403-00-6DP, hydrolyzed  
154403-01-7DP, hydrolyzed 154403-02-8DP, hydrolyzed  
154403-03-9DP, hydrolyzed 154403-04-0DP, hydrolyzed  
154403-05-1DP, hydrolyzed 154460-60-3DP, hydrolyzed  
RL: DEV (Device component use); SPN (Synthetic preparation); TEM  
(Technical or engineered material use); PREP (Preparation);  
**USES (Uses)**

(electrophotog. photoreceptor binder resin)

IT 152792-56-8 152792-58-0 152792-59-1 152792-60-4 152792-61-5  
152792-62-6 158348-29-9 158348-30-2 158348-31-3 158348-32-4  
158348-33-5 158348-34-6 158348-35-7 158348-36-8 158348-37-9  
158348-38-0 158348-39-1 158348-40-4 158382-18-4  
RL: DEV (Device component use); TEM (Technical or engineered  
material use); **USES (Uses)**

(initiator; electrophotog. photoreceptor binder resin)  
 IT 26098-32-8P 149234-93-5P 149341-87-7P 149341-90-2P  
 152792-28-4P 152792-29-5P 152792-30-8P 152792-31-9P  
 152792-32-0P 152792-34-2P 152792-35-3P 152792-36-4P  
 152792-37-5P 152792-39-7P 152792-42-2P 152792-45-5P  
 152792-46-6P 152792-48-8P 152792-49-9P 152792-50-2P  
 152792-51-3P

RL: DEV (Device component use); SPN (Synthetic preparation); TEM  
 (Technical or engineered material use); **PREP (Preparation)**

; **USES (Uses)**

(star-branched; electrophotog. photoreceptor  
 binder resin)

L32 ANSWER 29 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:641718 HCAPLUS Full-text

DOCUMENT NUMBER: 121:241718

TITLE: Electrophotographic photoreceptors suitable for  
 low-power laser scanning exposure

INVENTOR(S): Kato, Eiichi; Ishii, Kazuo

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 64 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06051540	A2	19940225	JP 1992-220928	199207 29
			<--	
US 5580690	A	19961203	US 1994-357150	199412 15
			<--	
PRIORITY APPLN. INFO.:			JP 1991-221294	A 199108 07
			<--	
			JP 1991-260531	A 199109 12
			<--	
			JP 1991-291865	A 199110 14
			<--	
			JP 1991-334539	A 199111 25
			<--	
			JP 1992-220928	A 199207 29
			<--	
			JP 1992-224563	A 199208 03
			<--	
			US 1993-39138	B2 199304 07
			<--	
			US 1993-70540	B1

&lt;--

AB The title photoreceptors comprises: (1) low mol.-wt. graft copolymer binder resins, which are made up of a macromonomer contg. [a1HCCa2(COOR3)] [a1,2 = H, halo; R3 = hydrocarbon] terminated at one end of the backbone chain with b1HC:Cb2R4- [R4 = divalent bonding group; b1,2 = H, hydrocarbon] and a monomer, [a1HCCa2(COOR3)], and has polar groups at the ends of the backbone chain; and high mol.-wt. star copolymer binder resins, which contain [a1HCCa2(COOR3)] bonded with an org. mol. at ≥3 sites and terminated with polar groups.

IT 152792-49-9P

RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**  
; **USES (Uses)**

(star-branched; electrophotog. photoreceptor  
binder resin)

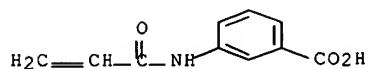
RN 152792-49-9 HCAPLUS

CN Benzoic acid, 3-[(1-oxo-2-propenyl)amino]-, polymer with ethyl 2-propenoate, methyl 2-methyl-2-propenoate and methyl 2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 17090-28-7

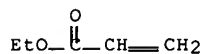
CMF C10 H9 N O3



CM 2

CRN 140-88-5

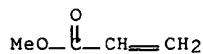
CMF C5 H8 O2



CM 3

CRN 96-33-3

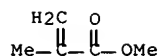
CMF C4 H6 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03G005-05  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 124338-79-ODP, carboxy-terminated 131808-68-9P 131808-82-7DP, hydroxy-terminated 131914-68-6DP, carboxy-terminated 137560-85-1DP, carboxy-terminated 139676-55-4DP, reaction product acrylic anhydride 139711-59-4DP, carboxy-terminated 141348-47-2P 141415-13-6DP, hydrolyzed 141415-63-6P 154104-31-1DP, carboxy-terminated 154104-32-2DP, carboxy-terminated 154104-34-4DP, carboxy-terminated 154104-35-5DP, carboxy-terminated 154104-36-6P 154104-37-7P 154104-38-8P 154104-39-9P 154104-40-2P 154104-41-3P 154104-42-4P 154104-43-5P 154104-45-7DP, carboxy-terminated 154104-46-8DP, dicarboxy-terminated 154104-47-9DP, carboxy-terminated 154104-48-0DP, hydroxy-terminated 154104-49-1DP, hydroxy-terminated 154104-50-4DP, hydroxy-terminated 154135-26-9DP, carboxy-terminated 154171-81-0DP, carboxy-terminated 154636-01-8DP, hydrolyzed 155313-09-0DP, carboxy-terminated 155418-24-9DP, carboxy-terminated 156957-95-8DP, hydrolyzed 156957-99-2DP, hydrolyzed  
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation);  
**USES (Uses)**  
 (electrophotog. photoreceptor binder resin)  
 IT 152792-56-8 152792-58-0 152792-59-1 152792-60-4 152792-61-5 152792-62-6 158348-29-9 158348-30-2 158348-31-3 158348-32-4 158348-33-5 158348-34-6 158348-35-7 158348-36-8 158348-37-9 158348-38-0 158348-39-1 158348-40-4 158382-18-4  
 RL: DEV (Device component use); TEM (Technical or engineered material use); **USES (Uses)**  
 (initiator; electrophotog. photoreceptor binder resin)  
 IT 26098-32-8P, 2-Hydroxyethyl methacrylatemethyl acrylatemethyl methacrylate copolymer 149234-93-5P 149341-87-7P 149341-90-2P 152792-28-4P 152792-29-5P 152792-30-8P 152792-31-9P 152792-32-0P 152792-34-2P 152792-35-3P 152792-36-4P 152792-37-5P 152792-39-7P 152792-42-2P 152792-45-5P 152792-46-6P 152792-48-8P **152792-49-9P** 152792-50-2P 152792-51-3P  
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)** ; **USES (Uses)**  
 (**star-branched**; electrophotog. photoreceptor binder resin)  
 L32 ANSWER 30 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:582166 HCAPLUS Full-text  
 DOCUMENT NUMBER: 121:182166  
 TITLE: Isolation of branch polymer from woody fiber-acrylamide graft copolymer  
 AUTHOR(S): Park, Sang Bum; Morita, Mitsuhiro; Sakata, Isao  
 CORPORATE SOURCE: For. Res. Inst., Seoul, 130-012, S. Korea  
 SOURCE: Polpu, Chongi Gisul (1993), 25(3), 24-31  
 CODEN: PCGIDY; ISSN: 0253-3200  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Korean  
 AB Acrylamide grafting onto ground wood pulp (GP) pretreated with peracetic acid (PAA) was carried out. The Ti ions were added to the polymn. system to induce the redox decompn. of the peroxide groups introduced onto the GP. The polyacrylamide (PAM) branches grafted to lignin in the resulting graft copolymer were isolated by the oxidative

degrdn. of lignin backbone with PAA (ca. 18%). The acid hydrolysis by 72% sulfuric acid was employed for the isolation of the PAM branches grafted to the carbohydrate. For a PAM grafting onto the GP, a large amt. of PAM branches were grafted to lignin, i.e. about 95% on the total amt. of PAM branches was grafted to lignin in the polymn. system. The higher values of the distribution in wt. of PAM branches grafted to lignin may be attributed to the surface grafting of monomer by redox decompn. between the Ti ion and peroxide groups introduced onto lignin, which is localized in the outside surface of the GP as an amorphous substance contrary to carbohydrate. The true informations on the d.p. of branched polymers were not obtained because of the lowering of polymn. degree of PAM by the two acid treatment.

IT 116038-79-0P, Lignin, polymer with 2-propenamide, graft  
RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(isolation of **branch** polymer from woody  
fiber-acrylamide graft copolymer)  
RN 116038-79-0 HCAPLUS  
CN Lignin, polymer with 2-propenamide, graft (9CI) (CA INDEX NAME)

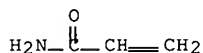
CM 1

CRN 9005-53-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 79-06-1  
CMF C3 H5 N O



CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 37  
IT 79-21-0, Peracetic acid  
RL: CAT (Catalyst use); **USES (Uses)**  
(acetamide surface grafting onto wood fiber using)  
IT 7440-32-6, Titanium, uses  
RL: CAT (Catalyst use); **USES (Uses)**  
(acetamide surface grafting onto wood fiber using peracetic acid  
and)  
IT 116038-79-0P, Lignin, polymer with 2-propenamide, graft  
RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(isolation of **branch** polymer from woody  
fiber-acrylamide graft copolymer)  
IT 9004-34-6  
RL: TEM (Technical or engineered material use); **USES (Uses)**  
(pulp, isolation of branch polymer from woody fiber-acrylamide  
graft copolymer for delignification of)

L32 ANSWER 31 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1994:334824 HCAPLUS Full-text  
DOCUMENT NUMBER: 120:334824  
TITLE: Electrophotographic photoreceptor  
INVENTOR(S): Kato, Eiichi; Ishii, Kazuo  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 6  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05040348	A2	19930219	JP 1991-221294	199108 07
			<--	
JP 3115365	B2	20001204		
US 5580690	A	19961203	US 1994-357150	199412 15
			<--	
PRIORITY APPLN. INFO.:			JP 1991-221294	A 199108 07
			<--	
			JP 1991-260531	A 199109 12
			<--	
			JP 1991-291865	A 199110 14
			<--	
			JP 1991-334539	A 199111 25
			<--	
			JP 1992-220928	A 199207 29
			<--	
			JP 1992-224563	A 199208 03
			<--	
			US 1993-39138	B2 199304 07
			<--	
			US 1993-70540	B1 199306 02
			<--	

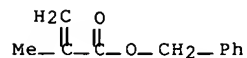
AB In the title photoreceptor comprising a photoconductive layer contg. at least an inorg. photoconductive material, a spectral sensitizing dye, and a binder resin, the above binder resin contains resin A1 and/or resin A2, and resin B. The above resin A1 is a graft copolymer (wt. av. mol. wt.  $1 \times 10^3 - 2 \times 10^4$ ) of (1) a monofunctional macromonomer M1 (wt. av. mol. wt.  $\leq 2 \times 10^4$ ) which contains monomeric unit CHa1Ca2O2Z 30 wt.% (a1, a2 = H, halo, CN, hydrocarbon; Z = hydrocarbon) and has at 1 chain end a polymerizable group CHb1:Cb2R3- [R3 = CO2, OCO, CH2OCO, CH2CO2, O, SO2, CO, CONR4, SO2NR4 (R4 = H, hydrocarbon), CONHCO2, CONHCONH, C6H4; b1,2 = H, halo, CN, hydrocarbon, CO2R5 (R5 = hydrocarbon)], and (2) a monomer CHa1Ca2O2Z, and is terminated with a polar group(s) selected from PO3H2, SO3H, CO2H, P(O)(OH)R1 [R1 = hydrocarbon, OR2 (R2 = hydrocarbon)] and groups contg. cyclic acid anhydride. The above resin A2 is a graft copolymer (wt. av. mol. wt.  $1 \times 10^3 - 2 \times 10^4$ ) of (1) a monofunctional macromonomer M2 (wt. av. mol. wt.  $\leq 2 \times 10^4$ ) which contains monomeric unit CHa1Ca2O2Z 30 wt.%, and a monomeric unit contg. a polar group defined in A1 1-50 wt.%, and has at 1 chain end a polymerizable group CHb1:Cb2R3-, and (2) a monomer CHa1Ca2O2Z. The resin B is a star-type copolymer (wt. av. mol. wt.  $2 \times 10^4 - 1 \times 10^6$ ) comprising  $\geq 3$  polymeric chains bonded to an org. mol. with the polymeric chains contg. CHa1Ca2O2Z 30 wt.% and a monomeric unit (0.05-10 wt.%) contg. a polar group defined in A1. The photoreceptor shows superior electrostatic properties (esp. in severe conditions) and good mech. properties to give sharp images, and it is very useful in semiconductor laser scanning-exposure.



IT 152792-24-0P  
 RL: PREP (Preparation)  
 (star-branched, prepn. and use of,  
 electrophotog. photoreceptor binder resin from)  
 RN 152792-24-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
 ethenylbenzene, N-methyl-2-propenamide and 2-propenoic acid (9CI)  
 (CA INDEX NAME)

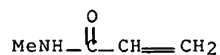
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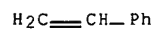
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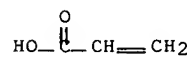
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CRN 100-42-5  
 CMF C8 H8



CM 4

CRN 79-10-7  
 CMF C3 H4 O2



IC ICM G03G005-05  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 35  
 IT 110685-65-9 150551-84-1 150551-85-2 150551-86-3 150551-87-4  
 150551-88-5 150551-89-6 150551-90-9 150551-91-0 150551-92-1  
 150551-93-2 152792-52-4 155313-00-1  
 RL: USES (Uses)  
 (initiator for star-branched copolymer)  
 IT 25133-97-5P 27155-22-2P 85200-16-4P 146056-80-6P

152792-18-2P 152792-19-3P 152792-20-6P 152792-21-7P  
152792-22-8P 152792-23-9P 152792-24-0P 152792-25-1P  
152792-27-3P 153772-42-0P

RL: PREP (Preparation)

(star-branched, prepn. and use of,  
electrophotog. photoreceptor binder resin from)

L32 ANSWER 32 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1994:311461 HCAPLUS Full-text  
DOCUMENT NUMBER: 120:311461  
TITLE: Electrophotographic photoreceptor for  
laser-scanning exposure  
INVENTOR(S): Kato, Eiichi; Ishii, Kazuo  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 05165227	A2	19930702	JP 1991-351258	199112 13
			<--	
JP 3126195	B2	20010122		
PRIORITY APPLN. INFO.:			JP 1991-351258	199112 13
			<--	

AB In the title electrophotog. photoreceptor comprising an inorg. photoconductor, a spectral sensitizer dye, and a binder resin, the latter contains  $\geq 1$  star copolymers incorporating  $\geq 3$  polymer chains based on polymer component (a) CHa1:Ca2(CO2R3) [a1,a2 = H, halo, CN, hydrocarbyl; R3 = hydrocarbyl] and polymer component (b) contg.  $\geq 1$  polar groups selected from PO3H2, SO3H, CO2H, P(O)(OH)R1 (R1 = hydrocarbyl, oxyhydrocarbyl), and cyclic acid anhydride group, with component (a)  $\geq 30\%$  and component (b) 0.01-20%. The photoreceptor shows good electrostatic and moisture-resistant characteristics.

IT 152222-87-2P 152222-92-9P 152222-94-1P  
152222-98-5P 152792-24-0P 155161-67-4P  
155161-68-5P

RL: PREP (Preparation)

(prepn. of star, dithiocarbamate-initiated, binder  
resin from)

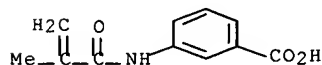
RN 152222-87-2 HCAPLUS

CN Benzoic acid, 3-[(2-methyl-1-oxo-2-propenyl)amino]-, polymer with  
phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 28319-08-6

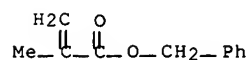
CMF C11 H11 N O3



CM 2

CRN 2495-37-6

CMF C11 H12 O2



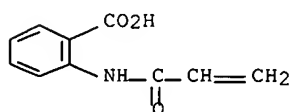
RN 152222-92-9 HCAPLUS

CN Benzoic acid, 2-[(1-oxo-2-propenyl)amino]-, polymer with phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17090-27-6

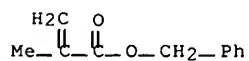
CMF C10 H9 N O3



CM 2

CRN 2495-37-6

CMF C11 H12 O2



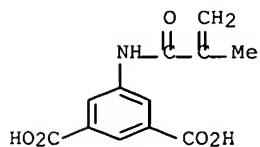
RN 152222-94-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[(2-methyl-1-oxo-2-propenyl)amino]-, polymer with phenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 73912-52-4

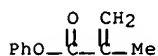
CMF C12 H11 N O5



CM 2

CRN 2177-70-0

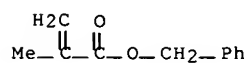
CMF C10 H10 O2



RN 152222-98-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
N-methyl-2-propenamide, phenylmethyl 2-propenoate and 2-propenoic  
acid (9CI) (CA INDEX NAME)

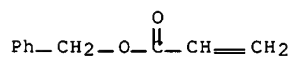
CM 1

CRN 2495-37-6  
CMF C11 H12 O2



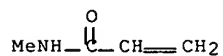
CM 2

CRN 2495-35-4  
CMF C10 H10 O2



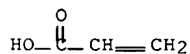
CM 3

CRN 1187-59-3  
CMF C4 H7 N O



CM 4

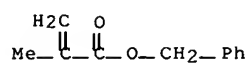
CRN 79-10-7  
CMF C3 H4 O2



RN 152792-24-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
ethenylbenzene, N-methyl-2-propenamide and 2-propenoic acid (9CI)  
(CA INDEX NAME)

CM 1

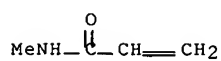
CRN 2495-37-6  
CMF C11 H12 O2



CM 2

CRN 1187-59-3

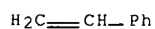
CMF C4 H7 N O



CM 3

CRN 100-42-5

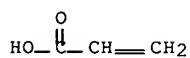
CMF C8 H8



CM 4

CRN 79-10-7

CMF C3 H4 O2



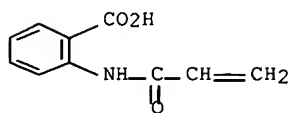
RN 155161-67-4 HCAPLUS

CN Benzoic acid, 2-[(1-oxo-2-propenyl)amino]-, polymer with phenylmethyl 2-methyl-2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17090-27-6

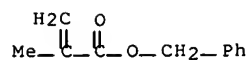
CMF C10 H9 N O3



CM 2

CRN 2495-37-6

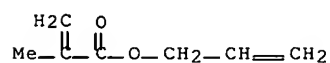
CMF C11 H12 O2



CM 3

CRN 96-05-9

CMF C7 H10 O2



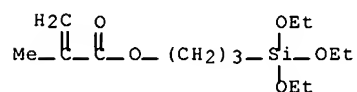
RN 155161-68-5 HCAPLUS

CN Benzoic acid, 3-[(1-oxo-2-propenyl)amino]-, polymer with ethyl 2-propenoate, methyl 2-methyl-2-propenoate and 3-(triethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

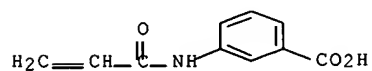
CMF C13 H26 O5 Si



CM 2

CRN 17090-28-7

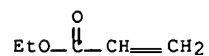
CMF C10 H9 N O3



CM 3

CRN 140-88-5

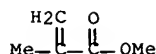
CMF C5 H8 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03G005-05  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 35  
 IT Acrylic polymers, uses  
 RL: **USES (Uses)**  
 (star, binder resin from)  
 IT 110685-65-9 150551-83-0 150551-84-1 150551-85-2 150551-86-3  
 150551-87-4 150551-88-5 150551-89-6 150551-90-9 150551-91-0  
 150551-92-1 150551-93-2 152792-52-4 155161-59-4 155161-79-8  
 155161-80-1  
 RL: **USES (Uses)**  
 (polymn. initiator, for star polymers)  
 IT 25133-97-5P 27155-22-2P, Acrylic acidmethyl acrylatemethyl  
 methacrylate copolymer 28572-98-7P 34134-09-3P 65697-22-5P  
 89162-02-7P 126969-71-9P 126969-78-6P 131004-79-0P  
 146056-80-6P 149265-81-6P **152222-87-2P** 152222-88-3P  
 152222-90-7P 152222-91-8P **152222-92-9P** 152222-93-0P  
**152222-94-1P** 152222-96-3P **152222-98-5P**  
 152222-99-6P 152244-96-7P 152792-18-2P 152792-19-3P  
 152792-20-6P 152792-21-7P **152792-24-0P** 152792-25-1P  
 152792-27-3P 155161-47-0P 155161-48-1P 155161-49-2P  
 155161-63-0P 155161-64-1P 155161-65-2P 155161-66-3P  
**155161-67-4P** **155161-68-5P** 155161-70-9P  
 155161-71-0P  
 RL: **PREP (Preparation)**  
 (prepn. of star, dithiocarbamate-initiated, binder  
 resin from)

L32 ANSWER 33 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1994:136059 HCAPLUS Full-text  
 DOCUMENT NUMBER: 120:136059  
 TITLE: Perfluoroalkyl halides and derivatives as  
 precursors for oil and water repellants and  
 surfactants  
 INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; DeWitte,  
 Johan E.; Hagen, Donald F.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: Can. Pat. Appl., 67 pp.  
 CODEN: CPXXEB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2071596	AA	19930111	CA 1992-2071596	199206 18
EP 526976	A1	19930210	EP 1992-305710	199206 22
EP 526976	B1	19970115		
R: BE, CH, DE, FR, GB, IT, LI, NL				
JP 05345732	A2	19931227	JP 1992-183345	199207

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&lt;--

JP 3231844 B2 20011126  
JP 2002138078 A2 20020514 JP 2001-204928

199207

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&lt;--

PRIORITY APPLN. INFO.: US 1991-728184 A

199107

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&lt;--

JP 1992-183345 A3

199207

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&lt;--

OTHER SOURCE(S): MARPAT 120:136059

AB The title compds. comprise a mixt. of straight and branched perfluoroalkyl groups bonded to Cl, Br, or I through a F-free alkylene group. Perfluorodecyltetrahydroiodide (prepd. from perfluorosulfonyl fluoride, 40% straight and 60% branched, treated first with I, then with C<sub>2</sub>H<sub>4</sub>) was derivatized to thiol functionality by treatment with thiourea in EtOH to give perfluorodecyltetrahydrothiol (I). I was added to a reaction mixt. contg. hexamethoxymethylmelamine to give a I-melamine condensate (II, 1:4 mol ratio). A 50/50 polyester/cotton fabric blend was treated with an emulsion of II at 0.3%, dried and cured at 150°, to give a fabric with oil resistance (AATCC 118-1975) 5 and 5 after 1 dry cleaning, vs. 3 and 2, resp., for a precursor perfluorodecyltetrahydroiodide having all straight chain perfluoroalkyl groups.

IT 150909-45-8P 150909-46-9P

RL: PREP (Preparation)

(linear and branched, prepn. of, as surfactant)

RN 150909-45-8 HCAPLUS

CN 1-Propanesulfonic acid, 2,2-dimethyl-3-[(1-oxo-2-propenyl)amino]-, telomer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decanethiol, compd. with 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 34143-74-3

CMF C10 H5 F17 S

HS—CH<sub>2</sub>—CH<sub>2</sub>—(CF<sub>2</sub>)<sub>7</sub>—CF<sub>3</sub>

CM 2

CRN 111-42-2

CMF C4 H11 N O2

HO—CH<sub>2</sub>—CH<sub>2</sub>—NH—CH<sub>2</sub>—CH<sub>2</sub>—OH

CM 3

CRN 150909-44-7

CMF (C8 H15 N O4 S)x

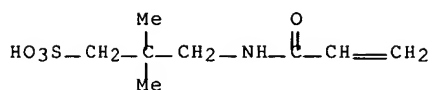
CCI PMS

CM 4

CRN 75345-02-7



CMF C8 H15 N O4 S



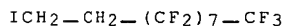
RN 150909-46-9 HCAPLUS

CN 1-Propanesulfonic acid, 2,2-dimethyl-3-[(1-oxo-2-propenyl)amino]-, telomer with 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-10-iododecane, compd. with 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 2043-53-0

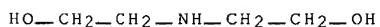
CMF C10 H4 F17 I



CM 2

CRN 111-42-2

CMF C4 H11 N O2



CM 3

CRN 150909-44-7

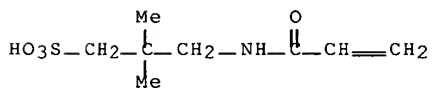
CMF (C8 H15 N O4 S)x

CCI PMS

CM 4

CRN 75345-02-7

CMF C8 H15 N O4 S



IC ICM C08L027-12

ICS C09D004-00; C09D127-12; C09D175-04; C08L075-04

CC 37-2 (Plastics Manufacture and Processing)

Section cross-reference(s): 23, 40, 46

IT 109-55-7 111-40-0, Diethylene triamine 112-24-3, Triethylene tetramine

RL: USES (Uses)

(linear and branched, Michael addn. of, with perfluoroalkyltetrahydroacrylate)

IT 150909-45-8P 150909-46-9P 150940-87-7P

RL: **PREP (Preparation)**  
 (linear and **branched**, prepn. of, as surfactant)  
 IT 423-60-9, Perfluorooctanesulfonyl chloride 423-62-1,  
 Perfluorodecyl iodide 32779-61-6 38436-14-5 40630-30-6  
 55591-23-6, Perfluorohexanesulfonyl chloride 133299-39-5  
 150940-83-3 150940-84-4  
 RL: **USES (Uses)**  
 (linear and branched, reaction of, with ethylene)  
 IT 307-35-7, Perfluorooctanesulfonyl fluoride 307-51-7,  
 Perfluorodecane sulfonyl fluoride 375-72-4, Perfluorobutanesulfonyl  
 fluoride 423-50-7, Perfluorohexanesulfonyl fluoride  
 RL: **USES (Uses)**  
 (linear and branched, reaction of, with iodine and ethylene)  
 IT 814-68-6, Acryloyl chloride  
 RL: **USES (Uses)**  
 (linear and branched, reaction of, with perfluoroalkyltetrahydro  
 alc.)

L32 ANSWER 34 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:257238 HCAPLUS Full-text

DOCUMENT NUMBER: 116:257238

TITLE: Graft copolymerization of vinyl monomers onto  
 nylon 6 fibers by simultaneous  $\gamma$ -ray  
 irradiation

AUTHOR(S): Iwasaki, Tatsuo; Tomita, Kosuke

CORPORATE SOURCE: Res. Dev. Cent., Unitika Ltd., Uji, 611, Japan

SOURCE: Sen'i Gakkaishi (1992), 48(1), 31-6

CODEN: SENGAS; ISSN: 0037-9875

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Vinyl monomers, such as styrene (I), Me methacrylate, Me acrylate, vinyl acetate (II),  
 acrylonitrile, and acrylamide, were grafted onto nylon 6 (III) fibers by a simultaneous  
 $\gamma$ -ray irradiation technique. Effects of various additives on the apparent percentage of  
 grafting as well as on the mol. wt. and mol no. of grafted vinyl polymer branches were  
 investigated. The mol. wt. of the grafted vinyl polymer branch was detd. by the  
 limiting viscosity no. of the branch polymer obtained by selective hydrolysis of the  
 backbone of III. The apparent percentage of grafting of the grafted poly-I increased  
 by adding MeOH, EtOH, AcOH, or propionic acid to the I monomer. The max. amt. of the  
 apparent grafting was obtained at a 1:1 mixt. of I and MeOH. An additive which acted  
 as both a good swelling agent for III and a precipitant for poly-I gave higher apparent  
 percentage of grafting. The apparent percentage of grafting of vinyl monomers except  
 II was increased by adding MeOH or EtOH to the monomers.

IT 107502-89-6P, Acrylamide-caprolactam graft copolymer

RL: SPN (Synthetic preparation); **PREP (Preparation)**  
 (fibers, prepn. and d. and mol. wt. of **branches** of,  
 solvent effect on)

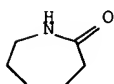
RN 107502-89-6 HCAPLUS

CN 2-Propenamide, polymer with hexahydro-2H-azepin-2-one, graft (9CI)  
 (CA INDEX NAME)

CM 1

CRN 105-60-2

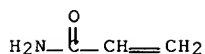
CMF C6 H11 N O



CM 2

CRN 79-06-1

CMF C3 H5 N O



CC 40-3 (Textiles and Fibers)

Section cross-reference(s): 35

IT 106340-29-8P, Caprolactam-styrene graft copolymer 107375-06-4P,  
Acrylonitrile-caprolactam graft copolymer 107502-89-6P,  
Acrylamide-caprolactam graft copolymer 107709-20-6P,  
Caprolactammethyl methacrylate graft copolymer 114672-17-2P,  
Caprolactam-methyl acrylate graft copolymer 140674-33-5P

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(fibers, prepn. and d. and mol. wt. of **branches** of,  
solvent effect on)

IT 56-23-5, Carbon tetrachloride, uses 64-17-5, Ethanol, uses  
64-19-7, Acetic acid, uses 67-56-1, Methanol, uses 67-64-1,  
Acetone, uses 71-36-3, 1-Butanol, uses 71-41-0, 1-Pentanol, uses  
71-43-2, Benzene, uses 75-65-0, tert-Butanol, uses 78-83-1,  
Isobutanol, uses 78-93-3, Methyl ethyl ketone, uses 79-09-4,  
Propionic acid, uses 100-51-6, Benzyl alcohol, uses 107-07-3,  
Ethylene chlorohydrin, uses 107-21-1, Ethylene glycol, uses  
108-39-4, m-Cresol, uses 108-88-3, Toluene, uses 108-95-2,  
Phenol, uses 110-82-7, Cyclohexane, uses 111-87-5, 1-Octanol,  
uses 1330-20-7, Xylene, uses

RL: **USES (Uses)**

(radiochem. graft polymn. of vinyl monomers on nylon fibers in  
presence of, graft d. and mol. wt. in relation to)

L32 ANSWER 35 OF 35 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:256099 HCAPLUS Full-text

DOCUMENT NUMBER: 116:256099

TITLE: The efficiencies of three initiators,  
iron(2+)-hydrogen peroxide, potassium persulfate  
and potassium permanganate and the kinetic  
equation in the grafting of acrylamide onto  
starch

AUTHOR(S): Yang, Guangzhong; Guo, Wenhua; Li, Quansheng;  
Lu, Shaojie; Cui, Xihai; Mo, Shucheng; Shi,  
Yinhua

CORPORATE SOURCE: Dep. Chem., Tianjin Univ., Tianjin, 300072,  
Peop. Rep. China

SOURCE: Chinese Chemical Letters (1991),  
2(12), 913-16

CODEN: CCLEE7; ISSN: 1001-8417

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A mechanism and kinetics study of graft radical polymn. of acrylamide onto starch in  
the presence of the title catalyst systems showed that KMnO4 gave the best grafting  
efficiency compared to the other catalysts. Graft copolymers with various mol. wts. of  
branched chains could be prepd. using the title catalysts.

IT 108573-32-6P, Acrylamide-starch graft copolymer

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(prepn. and mol. wt. of **branched**, effect of radical  
polymn. catalysts on)

RN 108573-32-6 HCAPLUS

CN Starch, polymer with 2-propenamide, graft (9CI) (CA INDEX NAME)

CM 1

CRN 9005-25-8

CMF Unspecified

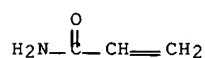
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 79-06-1

CMF C3 H5 N O



CC 35-3 (Chemistry of Synthetic High **Polymers**)

Section cross-reference(s): 44

IT 7722-84-1, Hydrogen peroxide, uses

RL: CAT (Catalyst use); **USES (Uses)**

(catalysts, contg. iron, for graft polymn. of acrylamide on starch, mechanism and kinetics in relation to efficiency of)

IT 7439-89-6, Iron, uses

RL: CAT (Catalyst use); **USES (Uses)**

(catalysts, contg. peroxide, for graft polymn. of acrylamide on starch, mechanism and kinetics in relation to efficiency of)

IT 7722-64-7, Potassium permanganate 7727-21-1, Potassium persulfate

RL: CAT (Catalyst use); **USES (Uses)**

(catalysts, for graft polymn. of acrylamide on starch, mechanism and kinetics in relation to efficiency of)

IT 108573-32-6P, Acrylamide-starch graft copolymer

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(prepn. and mol. wt. of **branched**, effect of radical polymn. catalysts on)

=>